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AN EXAMINATION OF FACTORS IMPACTING INFORMAL SECTOR WORKERS RETIREMENT PLANNING BEHAVIOUR IN THE GREATER ACCRA REGION OF GHANA

BY

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DECLARATION

I, Hannah Woe Aherdemla, hereby declare that this work is the result of my research and has not been presented by anyone for any academic award in this or any other university. All references used in this work have been fully acknowledged.

25/06/2025

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CERTIFICATION

We hereby certify that this thesis was supervised in accordance with the laid down procedures by the University of Ghana.

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DEDICATION

This thesis is dedicated to my parents, Mr Victor Aveekson Aherdemla and Mrs Vivian Valerie Aherdemla, and my siblings Selassie, Joshua, Jonathan, and Elisabeth Aherdemla for their unwavering support and guidance in every aspect of my life. Your love, encouragement, and belief in me has made this experience worthwhile. I will forever appreciate you for being my constant source of strength.

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LIST OF ABBREVIATIONS

AVE	Average Variance Extracted
CA	Cronbach Alpha
CB-SEM	Co-Variance Based Structural Equation Modelling
CR	Composite Reliability
ECH	Ethics Committee for the Humanities
EMDEs	Emerging Markets and Developing Economies
FC	Financial Cognition
FL	Financial Literacy
FS	Financial Satisfaction
FSo	Financial Socialisation
HTMT	Heterotrait-Monotrait
ILO	International Labour Organization
LCH	Life-Cycle Hypothesis
MA	Mental Accounting
NPRA	National Pensions Regulatory Authority
OECD	Organization for Economic Co-operation
OLS	Ordinary Least Squares

PLS-SEM	Partial Least Square Structural Equation Modelling
RPB	Retirement Planning Behaviour
RPI	Retirement Planning Intentions
SEM	Structural Equation Modelling
SSA	Sub-Saharan Africa
SSNIT	Social Security and National Insurance Trust Fund
TPB	Theory of Planned Behaviour
VIF	Variance Inflation Factor

ABSTRACT

This thesis investigates the factors that influence retirement planning behaviour among informal sector workers in Ghana. Relying on the Theory of Financial Planning Behaviour as the underpinning theory, the thesis examines the effect of financial satisfaction, financial socialization, financial literacy, mental accounting, and financial cognition; and explores how these factors shape retirement planning intentions and behaviour. The research also examines the gap between retirement planning intentions and actual behaviour, providing insights into the unique challenges faced by informal sector workers in securing financial stability for retirement. A total of 594 valid responses were collected from informal sector workers across various occupations in the services, construction, and manufacturing sectors in the Greater Accra Region using a structured questionnaire. The hypothesized relationships of the study were tested using Partial Least Squares Structural Equation Modelling (PLS-SEM) technique. Results from the structural model analysis indicate that informal sector workers demonstrate a clear intention to plan for retirement, which strongly influences their actual retirement planning behaviour. Factors such as financial literacy, financial socialization, and mental accounting had a positive and significant impact on retirement planning intentions, which in turn partially mediated the relationship between these factors and actual retirement planning behaviour. However, financial cognition did not significantly influence retirement planning intentions or behaviour, suggesting that cognitive financial skills alone are insufficient for effective retirement planning in this population. Interestingly, the study also found a negative but significant relationship between financial satisfaction and retirement planning intentions, indicating that individuals who feel financially secure are less likely to plan for retirement. This thesis provides both practical and academic insights into retirement planning for informal sector workers. The findings emphasize the need for policymakers to promote financial literacy and develop pension schemes suited to the low and irregular incomes of informal workers.

Financial institutions are encouraged to create flexible savings products, while practitioners can collaborate with communities to offer targeted financial education. Academically, the thesis explores factors like financial literacy, socialization, cognition, and mental accounting, offering a deeper understanding of the retirement planning challenges faced by informal workers. By applying the Theory of Financial Planning Behaviour, the study contributes new insights into how cognitive and social factors influence retirement planning, while also offering practical recommendations to improve retirement outcomes for this demographic.

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CHAPTER ONE

INTRODUCTION

1.0 Background

Transitioning into retirement is a significant life milestone, and adapting well to this phase is crucial for preserving a good quality of life in old age (Gall et al., 1997). With life expectancy on the rise, many individuals can now expect to spend at least a quarter of their lives in retirement, making it even more important to plan effectively for this stage (Liu et al., 2022). The organisation for Economic Co-operation and Development (OECD) has estimated that by 2050, approximately 25% of the population in its member states and 17% of the global population are projected to be over the age of 65 (He et al., 2016); however, the sad reality is that only 24.8% of working individuals worldwide actively set aside savings for their retirement (Demirgüç-Kunt et al., 2016). Similarly, the World Health Organization (WHO) report that by 2030, 1 in 6 people worldwide will be aged 60 or older, with the number in this age group expected to rise from 1 billion in 2020 to 1.4 billion. By 2050, this number will double to 2.1 billion, and the population of individuals aged 80 and above is projected to triple, reaching 426 million. (WHO, 2024). In Africa, the population is projected to reach 564 million by 2025 (Oteng et al., 2022). Despite the growing relevance of this issue, many individuals remain unprepared for this life stage. Economic volatility, coupled with inadequate social security systems in many countries, has made retirement planning a necessity rather than a choice.

In response, governments worldwide are introducing pension communication strategies to help individuals prepare for retirement (Deetlefs et al., 2019). These initiatives aim to encourage people to take a proactive approach to retirement planning, ensuring they have the financial resources needed for independence once they stop working. Despite these efforts, retirement planning remains low, with many individuals failing to adequately plan or invest for their future (Debets et al., 2018). The absence of adequate financial planning can be attributed to several factors, notably limited financial literacy, which renders many individuals either ill-equipped or incapable of making informed financial decisions (Klapper et al., 2015). Additionally, a significant number of people exhibit low financial self- efficacy, as they lack the confidence in their capacity to effectively manage their financial matters (Peeters et al., 2018).

In Africa, retirement planning is still developing although social protection issues have become a major focus in policy discussions (Govindjee, 2019). A key policy issue in this region is how to encourage individuals to engage in retirement planning, particularly since pension systems are more structured for public sector employees, where retirement is largely determined by age (Guven, 2019; Miti et al., 2021). However, participation in pension schemes remains low, with only 11.6% of older adults contributing, highlighting a significant gap in coverage (Guven, 2019). Traditionally, extended families have played a central role in supporting the elderly, but modernization and urbanization have weakened these structures (NPRA, 2020). Consequently, individuals can no longer rely solely on family support in their later years, making retirement planning increasingly important. As people migrate to cities and adopt more individualistic lifestyles, the once-strong familial safety nets have diminished, leaving many elderly individuals without reliable support (Abdulai et al., 2019; Demirgüç-Kunt et al., 2016; Githui, 2014; Kendig, 2023).

This shift highlights the increasing importance of personal retirement planning, as individuals can no longer rely solely on family members for their financial security in old age. Despite this growing need, several barriers hinder effective retirement planning on the continent. One major obstacle is the relatively low level of financial literacy, which leaves many individuals ill-equipped to make informed financial decisions about saving, and preparing for retirement (Monare-Muchazviona, 2023; ZOM, 2023). Without the necessary knowledge and skills, people are often unable to engage in meaningful retirement planning. Additionally, access to formal retirement savings schemes is limited for many Africans, particularly those working in informal sectors, which constitute a large portion of the workforce (Ngomba, 2020; Safari et al., 2021; Sarpong-Kumankoma, 2023). Informal sector workers often lack access to employer-sponsored pensions or government-supported social security programs, making it difficult for them to accumulate sufficient savings for retirement (Oteng et al., 2022).

The informal economy is a significant part of African economies, contributing between 25% and 65% of GDP and accounting for 30% to 90% of non-agricultural employment. Overall, about 83% of total employment in Africa is informal, with Sub-Saharan Africa having an even higher rate of 85% (ILO et al., 2022). While global trends indicate that the informal economy tends to decline with economic development, sub-Saharan African countries are projected to retain sizable informal sectors for the foreseeable future. This presents both opportunities and challenges for policymakers (Medina et al., 2017). These challenges are especially pronounced in regions like Ghana, where the economy is predominantly composed of informal workers.

In Ghana, the informal economy constitutes about 80-85% of total employment and 83% of the workforce in Accra, often operated and owned by families with no fixed retirement plans (Agyapong et al., 2016; Baah-Boateng & Vanek, 2020; NPRA, 2022). There is growing interest on expanding social protection support to individuals working in the informal sector. In 2005, the Social Security and National Insurance Trust (SSNIT) launched the Informal Sector Social Security Scheme, but participation rates were notably low (Kubuga et al., 2021; Osei-Boateng & Ampratwum, 2011). To bridge this gap, the National Pensions Act, Act 766, enacted in 2009,developed a third-tier pension system, combining mandatory and voluntary retirement plans, aimed at improving informal sector access and addressing concerns over declining investment returns (NPRA, 2022; Nunoo, 2013; Oteng et al., 2024). Despite this, the pension system has been acknowledged with a consistent low patronage and awareness among informal sector workers (Anku-Tsede, 2020; Boyetey et al., 2021). The situation is particularly concerning in light of Ghana's Aging Review. An increasing number of older individuals face financial difficulties upon reaching retirement age due to inadequate savings, high housing costs, and growing medical expenses (NPRA, 2020). If not addressed, poverty and other challenges related to old age and retirement could become overwhelming for Ghanaian workers in the coming years.

In response to these challenges, there is a growing need for innovative strategies and policies aimed at increasing participation in pension schemes and raising awareness among informal sector workers. Enhancing financial literacy, offering incentives for enrolment, and improving accessibility to retirement planning resources are essential steps toward addressing the gaps in the current system. Researchers have explored various approaches to address the low participation in pension schemes among informal sector workers. An overview of these studies emphasizes a troubling conclusion: the weak pension scheme coverage in the informal sector. Several factors account for the low participation in pension schemes, such as limited awareness of these programs. (Asafu-Adjaye, 2022; Ghosh, 2022; Miti et al., 2021; Mohanty & Patra, 2022; Obuobi, 2019), past negative experiences with formal social security initiatives (Asafu-Adjaye, 2022; NPRA., 2020), limited income (Mukherjee, 2023; Segbenya et al., 2024; Tong et al., 2021;Webb et al., 2020), and high operational costs associated with collecting contributions from informal workers (Asafu-Adjaye, 2022). Some studies have focused on the need for tailored pension schemes that are flexible and affordable, recognizing the irregular income patterns of informal workers (Ghorpade et al., 2024; Makochekanwa et al., 2024; Olivier, 2019; Rother et al., 2022; Seif Mohammed, 2021). Researchers have also advocated for increased public-private partnerships to create more inclusive social protection systems and emphasized the importance of financial education programs to improve understanding of retirement planning and savings among informal workers (Giomi et al., 2022; Rein & Rainwater, 2019). Given that informal workers presently lack retirement plan coverage, it is essential to explore alternative social protection strategies to ensure their well-being in old age.

1.1 Problem Statement

Previous research on financial preparedness for retirement has consistently highlighted critical concerns about the low level of participation of individuals in formal pension schemes (Kumar et al., 2019; Nam & Loibl, 2021; Vivel-Búa et al., 2019). Compared to other settings, the challenge is even more pronounced in Africa where there is limited access to formal pension systems, inadequate social security systems and cultural expectations of family support, which hinder individuals' ability to effectively plan for retirement (Abels & Guven, 2016; Nyang'oro & Njenga, 2022; Thovoethin & Ewalefoh, 2018). For instance, while about 33% of the global working-age population participate in pension schemes, only 8.5% of working-age individuals in Africa participate in such schemes (ILO, 2021). This low participation rate in formal pension systems in Africa is partially attributed to the informal nature of the economies in the region (Guven, 2019; Oduro, 2010; Stewart & Yermo, 2009). Several studies (Dovie, 2017; Githui, 2014; Oteng et al., 2022) have highlighted the inadequate coverage of pension schemes for informal workers. Factors such as lack of awareness, negative past experiences with formal social security systems, limited income, and high operational costs for collecting contributions from informal workers have often been associated with low level of participation in formal pension schemes by workers in the informal space. As a result, these workers adopt various strategies, such as informal savings through community-based groups, investing in assets like land or livestock, and relying on family support or remittances from relatives to provide for their financial needs in old age (Githui, 2014).

Interestingly, extant studies on pensions and retirement planning has predominantly focused on developed countries, where formal sector employment is more common and retirement systems are well-established (Choi, 2015; Hoffmann & Plotkina, 2020; Liu et al., 2021; Niu et al., 2020; Noone et al., 2010; Wang, 2007). This focus has resultedin significant gap in understanding retirement challenges in the context of developing economies, particularly in Africa, which is mostly characterised by the informal sector. Indeed, within the African context, the majority of existing studies have also concentrated on formal sector workers (Kpessa, 2011; Sarpong-Kumankoma, 2023; Stewart & Yermo, 2009), often neglecting the vast number of individuals employed in the informal sector. The informal sector in Africa, including Ghana, operates largely outside the framework of formal pension schemes and social security systems. Workers in this sector typically lack access to employer-sponsored retirement plans, face irregular income patterns, and have limited interaction with formal financial services (Chen, 2005; Dovie, 2017; Koto, 2015; Ofori, 2009; Oteng et al., 2022). As a result, they often struggle with inadequate retirement savings and financial planning. The distinct challenges faced by these workers highlight the need for targeted research (Darbi, 2016).

Given the informal sector's substantial role in the economy, understanding the retirement planning practices of these workers is crucial for developing more inclusive and effective pension systems. The current research intends to present some perspectives on the pension and retirement planning research from a context that is characterised by the informal sector that is often neglected in existing studies.

Moreover, many studies on retirement planning preparedness focus primarily on individuals' intentions to plan for retirement, without delving into whether these intentions lead to actual behaviour. Although intentions are an important indicator of future actions, research has shown that it does not always translate into concrete financial planning or savings behaviour. The intention-behaviour gap has therefore become an important issue in research in contemporary times particularly within the retirement planning research domain. For example, Choi et al. (2005) and Madrian and Shea (2001) highlight the "intention-behaviour gap", where individuals express a desire or intention to prepare for retirement but fail to follow through with actionable steps, such as setting aside funds or seeking professional advice. Emerging studies have emphasized the need for research to move beyond intentions and examine the factors that either facilitate or hinders the translation of retirement planning intentions into actual behaviour (Conner & Norman, 2022; Lim & Weissmann, 2023; Sultan et al., 2020).

Extant studies on financial planning behaviour have predominantly employed theoretical frameworks such as the Theory of Planned Behaviour, Prospect Theory, the Life-Cycle Hypothesis, and the Financial Capability Model. Although these theories have contributed substantially to our understanding of financial planning behaviour, they are often limited in scope. Yeo et al. (2023) argue that these existing models are incomplete and fail to offer a comprehensive explanation of financial planning behaviour. The authors contend that these theories, while valuable, do not fully capture the complexities and multi-dimensional nature of financial decision-making, necessitating the development of a more holistic model.

According to Yeo et al. (2023), existing theories often focus on specific dimensions of financial behaviour, such as attitudes, subjective norms, or perceived behavioural control, but they overlook the broader interplay of psychological, social, and cognitive factors that influence financial planning. For example, the Theory of Planned Behaviour emphasizes intention as a key predictor of behaviour but fails to account for instances where intentions do not translate into actions. Similarly, Prospect Theory and the Life-Cycle Hypothesis offer insights into risk preferences and saving patterns over time, yet they assume a level of rational decision- making that may not align with real-world financial behaviour.

Yeo et al. (2023) propose that to address these gaps, a more integrated approach is required, one that synthesizes elements from behavioural finance, such as financial literacy, mental accounting, and financial cognition. Their proposed model seeks to offer a holistic framework for understanding financial planning behavior by accounting for both the internal cognitive processes and external social influences that shape individuals' financial decisions, ultimately leading to better predictive power and practical applicability.

This study will significantly enhance the understanding of retirement planning in the informal sector by empirically validating the applicability of financial planning behaviour theory in this context. By addressing a crucial gap in the literature, the findings provide meaningful insights for policymakers, financial institutions, and other relevant stakeholders, contributing meaningfully to the ongoing discourse on retirement planning in informal economies.

1.2 Research Objectives

i. To investigate the intentions and retirement planning behaviour of informal sector workers.

ii. To examine the factors that influence informal sector workers' retirement planning decisions.

iii. To investigate the relationship between informal sector workers' retirement planning intentions and their actual retirement planning behaviour.

1.3 Research Questions

i. What are the intentions and retirement planning behaviours of informal sector workers?

ii. What factors influence the retirement planning decisions of informal sector workers?

iii. Do the retirement planning intentions of informal sector workers translate into their actual retirement panning behaviour?

1.4 Significance of the Study

First, it responds to a notable gap in the literature by focusing on retirement planning in the informal sector, an area that has been largely overlooked by existing research. Previous studies on financial preparedness for retirement have primarily focused on developed economies with well-established formal pension systems, often overlooking the unique challenges faced by informal sector workers, particularly in Africa. Given the predominant role of the informal sector in many African economies, including Ghana, this study offers essential insights into the retirement planning practices of these workers who typically operate outside formal pension systems.

Additionally, the study will enhance the current understanding of the intention-behaviour gap in retirement planning, especially within the context of the informal economy. While many studies emphasize individuals' intentions to plan for retirement, this research will explore the factors that either facilitate or hinder the translation of these intentions into actual retirement planning behaviour. This exploration of the "intention-behaviour gap" is particularly timely, as emerging research calls for more comprehensive models that integrate psychological, social, and cognitive factors influencing financial decision-making.

Finally, the study advances understanding of financial planning behaviour theory by empirically validating its relevance in the informal sector. By integrating concepts from behavioural finance, such as financial literacy, mental accounting, and financial cognition, this research seeks to offer a more holistic model of financial planning behaviour. The findings from this study will provide practical insights for designing policies and financial products tailored to the unique needs of informal sector workers, ultimately supporting their financial security in retirement.

1.5 Organisation of the Study

The study investigates the factors that influence the retirement planning behaviour of individuals in Ghana's informal sector. The research comprises five chapters.

The first chapter introduces the study, providing an understanding of the factors that influence the retirement planning behaviour of individuals in the informal sector. It presents the problem statement, establishes the research objectives, and outlines the contribution and significance of the study.

Chapter two reviews related literature on the subject matter. It considers articles, theses, and other relevant works, discusses theories used for the research, and presents the conceptual framework. This chapter describes the primary constructs and the anticipated relationships among them. It also develops the hypothesis for the study.

Chapter three outlines the research methodology, detailing the study design, target population, research strategy, sampling methods, and data collection instruments.

Chapter four analyses the results and discusses the findings gathered from participants. The significance of the study's hypotheses is tested in this chapter.

Chapter five outlines the relevant conclusions and recommendations for future research. This chapter is followed by references and an appendix.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter provides an overview of existing and relevant literature related to the study. The chapter begins with a discussion of the key theories that underpin financial planning behaviour, followed by an empirical review of key concepts including financial socialization, satisfaction, literacy, cognition, and mental accounting. The review also explores the effect of these factors on retirement planning intentions and behaviour. Following the literature review, the study's hypotheses are developed based on theory and the gaps identified in the existing literature.

2.1 Theoretical Background

2.1.1 Theoretical Underpinnings of Financial Planning Behaviour

Researchers have utilized several theories to examine retirement planning as a concept and the dominant factors associated with it. These theories include the Prospect Theory, the Life-Cycle Hypothesis, the Financial Capability Model and the Theory of Planned Behaviour (TPB).

Prospect Theory focuses on decision-making under uncertainty, particularly how individuals are more sensitive to potential losses than gains. While useful for understanding short-term, risk-based decisions, it overlooks the long-term and structured nature of financial planning, such as retirement savings. The Life-Cycle Hypothesis (LCH) explains how individuals save and spend over their lifetimes, assuming rational decision-making. However, it fails to account for psychological and emotional factors, such as lack of self-control or impulsive spending, that often disrupt rational planning. The Financial Capability Model emphasizes financial knowledge, skills, and attitudes, highlighting the importance of financial literacy. However, it does not fully capture how behavioural and psychological influences, such as emotions and social pressures, affect financial decision-making. Despite their contributions, these theories lack a comprehensive approach that integrates behavioural, cognitive, social, and economic factors in understanding financial planning behaviour. The TPB is the most well-known theory used in the financial planning literature. It is used to predict and interpret individuals' behaviour as well as the factors that hinder the control of their behaviour.

2.1.2 The Theory of Planned Behaviour (TPB)

The (TPB) extends the Theory of Reasoned Action.. This earlier theory posited that human behaviour is influenced by the intention to engage in specific actions, with this intention shaped by attitudes and subjective norms. Attitude, which refers to an individual's conviction regarding whether a specific behaviour or action positively or negatively contributes to one's life (Ajzen, 1980). Attitude comprises two elements: one pertains to the perspective toward a tangible item (such as money, savings, or pension), and the other involves the stance towards a specific behaviour or the execution of a particular action like utilizing savings or money for financial planning (Yeo et al., 2023). A lot of studies have established a notable correlation between attitudes and behavioural intention (Brener et al., 2013; Liu et al., 2020; Nguyen et al., 2023; Redmond et al., 2022; To & Lam, 2023). According to Xiao (2008), if an individual holds a more positive attitude toward engaging in a behaviour, it becomes easier for them to carry out that behaviour, and their behavioural intention becomes stronger.

Subjective norms, which is also denoted by an individual's view of the likelihood that others will express approval or disapproval of a particular behaviour (Fishbein & Ajzen, 1977). It centres on various factors related to individuals, encompassing aspects like social connections, cultural standards, and collective beliefs. This constitutes a primary factor influencing behavioural intention within the frameworks of the theory of reasoned action and the Theory of Planned Behaviour (TPB). Several studies have shown a significant correlation between subjective norms and intention and find that an individual may be inclined to engage in a specific behaviour, even if they do not personally prefer it, when influenced by social pressure and external social factors (Kang et al., 2006; Nur & Dewanto, 2022; Phamn et al., 2023; Tey et al., 2022; Tualeka & Widajati, 2018).

As an extension of Ajzen's (1985) framework, the theory of planned behaviour explicitly incorporates perceived behavioural control. This concept considers the resources and opportunities available to an individual, as well as the ease or difficulty of performing a specific behaviour, as key factors influencing behavioural intention. The idea of behavioural control has been defined and implemented in various manners (Aitken et al., 2020; Bandara & Amarasena, 2018; Mousavinia, 2023; Ru et al., 2018; Sugandini et al., 2018; Yang et al., 2021; Yzer, 2012). It has captured significant attention from both scholars and professionals due to its usefulness in elucidating the disparity between intention and behaviour (Chatzisarantis & Hagger, 2008; Churchill et al., 2019; Conner et al., 2016; Öhman, 2011). More crucially, it serves as a valuable tool for recognizing and implementing intervention strategies that can adequately bridge the gap between intention and desired behaviour (Lim & Weissmann, 2023). The researchers further posit that the perceived ability to control behaviour is heightened when an individual possesses increased resources, such as social media influence, financial means, time, and a variety of choices.

Intention is the individual's perception or inclination towards carrying out a specific action or behaviour (Fishbein & Ajzen, 1977). Definitions of intention often emphasize the concept of intentions as self-directed commitments or instructions to engage in specific behaviours (Sheeran & Webb, 2016), which captures the underlying motivation or commitment to act. The Theory of Planned Behaviour (TPB) posits that the extent to which intentions translate into actions is influenced by the level of volitional control. However, Fishbein and Ajzen (1977) posit that although individuals have the ability to control their behaviour, accurately predicting their actual actions based on their intentions does not necessarily indicate a perfect correlation between intention and behaviour. Ajzen et al. (2004) also suggest that individuals commonly display a bias, overestimating the likelihood of desired behaviours and underestimating the likelihood of undesired behaviours. This bias can result in inconsistencies between intentions and actual actions. Various studies and reviews, such as those by Sheeran and Webb (2016) and Webb and Sheeran (2006), have identified several moderators that affect the strength of the intention-behaviour relationship. According to a recent review by Rhodes et al. (2022), these moderators can be grouped into goal dimensions, intention basis and structure, past behaviour or habit, personality and socio-demographic characteristics, as well as temporal stability, providing valuable insights into understanding the complexities of the intention-behaviour relationship.

Behaviour refers to a person engaging in a series of activities that constitute an obvious reaction to a particular objective (Fishbein & Ajzen, 1977). The likelihood of an individual adopting a specific behaviour is directly impacted by their intention to engage in that behaviour, and this intention is indirectly shaped by the individual's attitude, subjective norms, and perceived behavioural control. Ajzen, in many of his articles that he single authored (Ajzen, 1985; 1991; 2002; 2005) and co-authored (Ajzen et al., 2004; Ajzen & Dasgupta, 2015; Fishbein & Ajzen, 1977), noted that individuals with strong intentions to execute a behaviour might not follow through, possibly due to their inability to exert voluntary control over the behaviour. Additionally, he highlighted the challenge of obtaining an objective measure of the extent to which a behaviour is genuinely subject to voluntary control. As a result, Lim and Weissmann (2023) introduced two broad forms of behavioural control: covert behavioural control, which is the internal influence individuals have, shaped by perceptions such as self-efficacy and neutralization. This form of behavioural control is intentional, subjective, continuous, and multidimensional, shaping how one perceives their abilities. The other form of behavioural control, Overt behavioural control is external, seen in factors like product accessibility shaped by the marketplace. It is objective, categorical, and acts as a moderator between intentions and actions. The distinction between covert and overt behavioural control offers a framework for understanding how different sources and types of control influence behaviour, considering both internal and external factors in the decision-making process.

The TPB has found extensive application across various research areas, serving as a predictive and explanatory framework for understanding individuals' behaviour and their lack of effective control over their actions and has found extensive application in various research domains over the preceding decades; for example, social sciences (Cubitt et al., 2020; Ghorbanzadeh et al., 2023; Khani Jeihooni et al., 2019; Liao et al., 2018; Neto et al., 2020), business management and accounting (Afshar Jalili & Ghaleh, 2021; Chen, 2016; Khasawneh & Irshaidat, 2017; Kumar, 2021; Neto et al., 2020), and health and medicine (Davis Le Brun et al., 2023; Jalambadani et al., 2020; Seong & Hong, 2021; Shimazaki et al., 2017; Sun et al., 2020).

The Theory of Planned Behaviour explains financial behaviour through the lens of intentions, attitudes, and perceived control, assuming that positive intentions will naturally lead to actions. However, it overlooks external barriers such as socio-economic factors that can prevent individuals from following through on their intentions. Despite this limitation, TPB is recognized for its flexibility and conciseness, and it has a proven record of generating new theories, such as the Theory of Behavioural Control (Lim & Weissmann, 2023). Building on this foundation, Yeo et al. (2023) introduced the Theory of Financial Planning Behaviour, which addresses some of the gaps in earlier models and is the theory underpinning this study. This new theory aims to provide a comprehensive explanation of financial behaviour by incorporating behavioural, social, and contextual factors into the decision-making process.

2.1.3 Theory of Financial Planning Behaviour

This theory developed by Yeo et al. (2023) suggests that the financial planning behaviour of a person can be interpreted and explained by replacing the primary components of the theory of planned behaviour with applicable concepts from behavioural finance. The authors introduce factors, such as financial satisfaction as attitude, financial socialization as subjective norms, and financial literacy, mental accounting, and financial cognition as perceived behavioural controls, which have a direct effect on the intention to engage in financial planning and indirectly affect the actual implementation of financial planning behaviours. These behaviours can take various forms, including managing cash flow, taxes, investments, risks, estates, and retirement planning.

Yeo et al. (2023) have introduced a formal theory within their framework for understanding financial planning behaviour. The researchers argue that the current understanding in this area heavily relies on borrowed theories, resulting in fragmented knowledge and isolated findings. By offering an integrated framework, the authors aim to consolidate these disparate insights and mitigate the production of isolated knowledge within the field. Moreover, their framework not only refines existing insights but also facilitates the recognition of new perspectives on financial planning behaviour. According to Kumar et al. (2019) and Lim et al. (2022a, b), a well-structured framework provides a solid foundation for accumulating insights, thereby enhancing the growth of knowledge within the field.

In the theory of financial planning behaviour, the authors contextualised the TPB to explain financial planning behaviour. The authors posit that attitude can manifest as financial satisfaction wherein higher levels of financial satisfaction are generally linked with a positive attitude towards financial planning. Individuals who are financially satisfied may feel more confident about their abilities to plan for their financial engagements. Subjective norms will present as financial socialisation, positive financial socialisation experiences expose individuals to societal norms regarding financial planning through their relations family, peers, and work mates. Perceived behavioural control combines financial literacy, mental accounting, and financial cognition. Higher levels of financial literacy are generally linked to better financial planning outcomes. Positive mental accounting, where individuals allocate resources effectively for specific financial goals, can also lead to improved planning. Similarly, stronger financial cognition helps individuals make more informed decisions, including those related to financial planning. Yeo et al. (2023) further propose that the influence of financial satisfaction and financial socialisation on financial outcomes is mediated by financial literacy, which is shaped by an individual’s ability in mental accounting and financial cognition.

These factors directly influence one's intention to engage in financial planning and subsequently shape the actual adoption of the financial planning behaviour. These constructs are measurable and can be analysed quantitatively using structured surveys and statistical methods like PLS-SEM. Thus, the theory is well-suited for quantitative research aimed at predicting financial planning intentions and behaviour (LeBaron-Black et al., 2023;Herrador-Alcaide et al., 2021)

2.2 Empirical Literature

2.2.1 The Concept of Financial Planning

Personal financial planning involves systematically managing one's wealth to achieve financial contentment (Kapoor et al., 2014). It encompasses coordinating all financial activities, addressing both present and future aspects (Jamil et al., 2017). Mahapatra et al. (2022) argue that the discourse not only focuses on financial management strategies but also emphasizes the importance of adopting appropriate financial behaviours. It is often depicted in the literature as a journey towards financial wellbeing and security. Researchers define financial planning as the necessity for improving one's standard of living, minimizing financial risks, optimizing investments, and building long-term wealth (Koh & Fong, 2017); and strategically handling finances through prudent spending, saving, and investment choices that enables individuals to fulfil upcoming financial requirements (Zhang & Sussman, 2018). Swart (2012) describes personal financial planning as the process of arranging a person's financial and personal information to create a strategic roadmap for managing income, assets, and debts effectively, with the aim of achieving both short-term and long-term goals and objectives. The consistency among these definitions lies in the acknowledgment of personal financial planning as a strategic process aimed at achieving various financial goals and objectives. These definitions all emphasize the importance of managing income, assets, and liabilities effectively to improve one's standard of living, minimize financial risks, optimize investments, and build long-term wealth. Additionally, they highlight the need for careful decision-making in spending, saving, and investing to meet both short-term and long-term financial needs.

Garman and Forgue (2014) suggest that displaying greater proficiency in personal financial matters amidst life's financial challenges, responsibilities, and opportunities often results in various financial advantages. These advantages may include reduced credit costs, lowered tax burdens, improved mortgage terms, decreased insurance premiums, and similar benefits. Furthermore, financial literacy enhances the ability to make sound investment decisions, effectively plan for retirement, and ensure the orderly management of their estates in the event of their demise (Deventer et al., 2014). Swart (2003) emphasizes the importance of continuously anticipating future financial needs for efficient personal financial planning. However, Murphy and Yetmar (2010) highlight the tendency for individuals to make financial decisions haphazardly, often relying on informal advice or chance. This casual attitude is exemplified by the adoption of savings plans based solely on leftover funds at the end of the month. The literature also suggests that inadequate financial management leads to significant problems such as high financial debt, excessive credit card use, elevated stress levels, and low financial security (Sabri et al., 2010). Hence, prioritizing effective management of financial resources is crucial (Falahati et al., 2011). Despite the awareness of the importance of financial planning, many individuals fail to plan their finances due to insufficient knowledge and skills (Fox & Bartholomae, 2020; Murphy & Yetmar, 2010).

The process of financial planning can manifest in six components (Altfest, 2004). He identifies these to include tax planning to lower tax burdens, cash flow planning to manage saving and spending, investment planning to allocate resources wisely for the future, risk management to handle uncertainties, retirement planning for when income stops, and estate planning for distributing wealth among family members. Tax planning aims to minimize tax liabilities through strategic financial decisions. It involves leveraging deductions, credits, and exemptions, as well as timing income and expenses to optimize tax outcomes while staying compliant with tax laws. Cash flow planning involves managing the inflow and outflow of money to meet financial obligations and achieve goals. This includes budgeting, tracking expenses, managing debts, and establishing emergency funds. Investment planning entails choosing appropriate strategies to achieve financial objectives. This includes assessing risk tolerance, diversifying portfolios, and selecting suitable investment vehicles aligned with goals and risk preferences. Swart (2012) underscores the significance of investment planning within personal financial planning. It is considered a cornerstone due to its integral role in retirement planning, directly impacting the preservation of future financial stability, and is essential for achieving various short-, medium-, and long-term financial goals.

Retirement planning goes beyond simply putting money into a pension, provident, or retirement annuity funds. It encompasses understanding tax regulations, compound interest, the present and future value of money, and developing a solid investment strategy (Botha et al., 2017). Retirement planning involves estimating expenses, setting savings goals, selecting retirement accounts, and developing withdrawal strategies to ensure financial security. Risk management focuses on identifying and mitigating financial risks during retirement. This includes assessing risks such as illness, disability, and liability, and employing strategies like insurance coverage and emergency savings to safeguard against them.

Estate planning focuses on arranging asset transfer and minimizing tax implications upon death. It involves drafting wills, establishing trusts, and designating beneficiaries to ensure the orderly distribution of assets according to preferences. Botha and Musengi (2012) describe it as planning that involves the structured organization, administration, and protection of an individual's estate and assets. The primary objective is to optimize benefits for both the individual and their beneficiaries, including family members and heirs, by effectively managing the estate throughout the individual's lifetime and posthumously, regardless of the timing of death.

In integrated financial planning, all six areas, namely cash flow planning, investment planning, risk management, estate planning, retirement planning, and tax planning are ideally addressed. However, an individual's life stage and circumstances, such as retirement may necessitate prioritizing certain areas over others. For instance, retirees may not prioritize tax planning, while someone who has been retrenched may not have the capacity to focus on investment planning (Yeo et al., 2023). Another instance could be a young professional just starting their career. At this stage, they may prioritize cash flow planning to manage their initial income, followed by investment planning to build wealth over time. They might not immediately focus on estate planning, as they may not have significant assets or have dependents to consider.

Koh (2012) identified eight types of financial plans centred around various financial objectives. These include a money management plan commonly known as savings plan, budget planning, liability plan, insurance plan, housing plan, investment plan, retirement plan, and estate plan. Research by the ANZ Banking Group in Australia and New Zealand revealed that 37% of respondents, between the ages of 18 to over 70, lack knowledge regarding the necessary funds for a comfortable retirement (Louw, 2009). Similarly, Murphy and Yetmar (2010) discovered that while many individuals recognize the significance of financial planning and express interest in creating their own financial plans, only a small fraction possess the requisite knowledge and expertise to do so effectively.

Personal finance is interdisciplinary, encompassing diverse domains such as psychology, information technology, family studies, sociology, finance, and economics (Schuchardt et al., 2007). Various disciplines offer distinct theories that contribute to comprehending a person's financial behaviour(Copur & Gutter, 2019). In practical terms, Palmer et al. (2009) stressed personalized financial planning for economic uncertainty. Hanna and Lindamood (2010) highlighted its benefits for wealth and risk management. However, Chen and Volpe (1998) noted a widespread lack of financial skills among individuals. This deficiency can lead to poor financial decisions, inadequate savings, and a lack of preparedness for financial emergencies. The financial literacy gap points to the urgent need for improved financial education initiatives that empower individuals with the core competencies needed for effective financial management responsibly and achieve long-term financial objectives.

2.2.2 Retirement Planning Behaviour

Retirement planning involves getting ready for the period when someone exits the workforce and no longer receives income from employment. It involves creating a plan to manage current expenses and savings effectively to guarantee a financially stable retirement (Tomar et al., 2021). Numerous working individuals worry about whether they can accumulate enough savings to sustain themselves during retirement, considering rising healthcare expenses, longer life expectancies, and declining saving rates (Kimiyagahlam et al., 2019). Retirement is a complex concept that can be viewed as a multifaceted process or event, as described by Beehr (1986), encompassing various factors that prompt individuals to contemplate planning for or opting to retire. On the contrary, economists who analyse retirement tend to perceive it as an abrupt rather than gradual transition, characterized by a permanent and voluntary decision akin to initiating pension benefits. This perspective also views retirement as an individual choice rather than a collaborative decision involving household members, as outlined by Banks and Smith (2006). Retirement planning should be understood as a multifaceted concept that encompasses various components including financial preparedness, health considerations, social engagement, and psychological readiness (Lee & Law, 2004). Research indicates that effective retirement planning can lead to favourable outcomes in the post-retirement phase. For instance, Noone et al. (2009) discovered that individuals who had conversations about retirement with their spouses and had established savings plans, reported higher levels of satisfaction in retirement, along with better physical and emotional well-being. Similarly, Yeung and Zhou (2017) conducted a small-scale longitudinal study showing that participating in retirement planning activities prior to retirement correlates with a larger pool of retirement resources beforehand, subsequently leading to positive changes in psychological well-being and increased retirement satisfaction. This observation aligns with Wang's (2007) findings, which suggested that retirees who engage in retirement planning are most likely to experience minimal disruptions in their psychological well-being during the transition into retirement compared to those who did not engage in such planning.

Preferences in retirement planning and related decision-making, which denote the intention to retire, are viewed as crucial components of retirement planning behaviour (Topa et al., 2009). In light of the complex nature of retirement planning, it is relevant to adopt an inclusive approach that addresses the diverse aspects of life after retirement. Understanding retirement planning preferences and decisions, as highlighted by Topa et al. (2009), is crucial for assessing individuals' preparedness and intentions regarding retirement.

2.2.3 Financial Satisfaction

Financial satisfaction has received substantial attention in studies related to financial decision-making and personal financial planning, as it is a significant variable in both economic and psychological research on happiness and subjective well-being (Easterlin, 2006; Plagnol, 2011; Woodyard & Robb, 2016). As a component of overall well-being, financial satisfaction reflects a state of health, happiness, and freedom from financial concerns (Campbell, 1981; Zimmerman, 1995). This favourable state is achieved when individuals are pleased with both their objective and subjective financial circumstances (Joo & Grable, 2004). Understanding financial satisfaction and its determinants holds practical relevance in financial planning and public policy development while also equipping policymakers to promote financial well-being on a broader scale (Saurabh & Nandan, 2018).

Plagnol (2011) posits that financial satisfaction is influenced by both objective financial factors, such as income and wealth, and perceived financial needs. When individuals find that their financial resources do not meet their aspirations, they may accumulate debt, leading to fluctuations in their level of financial satisfaction over time. This is particularly important as financial satisfaction has extensive implications for various facets of life. Shim et al. (2009), for instance, found that financial satisfaction has an impact on young adults' academic outcomes as well as their physical and mental health. In addition, numerous studies have highlighted the connection between financial satisfaction and broader life satisfaction and well-being (Mookherjee, 1997; Stack & Eshleman, 1998; Van Praag et al., 2003; Woodyard & Robb, 2016).

Financial satisfaction is also relative and influenced by social comparisons, as highlighted by Burchardt (2005). Residents in different regions may experience varying degrees of financial satisfaction, even if their objective financial conditions are similar (Fan & Babiarz, 2019). This relativity underscores the importance of social context in assessing financial well-being. Behavioural determinants of financial satisfaction, such as setting aside funds for unexpected emergencies and planning for retirement, further emphasize the role of financial behaviour in shaping an individual's overall financial contentment (Hasibuan et al., 2018a; Lappeman et al., 2019; Saurabh & Nandan, 2018). Financial satisfaction is a crucial aspect of personal well-being and has significant implications for financial planning, public policy, and individual happiness. Supporting this, Xiao et al. (2006) find that engaging in positive financial behaviours enhances financial satisfaction among customers who use credit counselling services. Likewise, Xiao et al. (2009) also found that students who engaged in positive financial behaviours reported higher levels of financial satisfaction.

Financial satisfaction is achieved through consistent and effective money management behaviours, which align with the stages of behavioural change (O'Neill et al., 2000). Individuals who are ready to address financial challenges are more likely to adopt healthy financial practices, such as saving and investing, instead of engaging in problematic behaviours like excessive spending and credit card use. Success in these positive changes depends on inherent traits such as determination, discipline, awareness, and positive outlook. These qualities are essential for managing common financial behaviours, including cash management, credit usage, and saving, which are fundamental aspects of financial planning. Sound financial practices in areas such as personal finance fundamentals, borrowing, saving, investing, and risk management contribute to overall financial well-being Sound financial practices in areas such as personal finance fundamentals, borrowing, saving, investing, and risk management contribute to overall financial well-being (Huston, 2010). Woodyard and Robb (2016) examined six of the best financial practices, such as setting aside emergency funds, obtaining annual credit reports, avoiding overdrafts, paying off credit cards, maintaining a retirement account, and having risk management structures. Their study found that income is a key demographic variable influencing financial behaviour, while financial confidence and knowledge are key subjective factors.

In recent decades, scholars have increasingly focused on financial satisfaction, recognizing it as a key component of personal well-being and a relevant developmental concept for society (Ali et al., 2015; Chandra & Memarista, 2015; Falahati et al., 2011; Halim & Astuti, 2015; Kirbiš Škreblin et al., 2017; Natsir et al., 2020; Ng et al., 2019). Researchers have identified a wide range of factors that influence financial satisfaction, including “culture, personality traits, financial attitudes, financial attitude, financial behaviour, financial literacy, financial knowledge, financial management, financial solvency, financial strain, and financial socialization” (Hasibuan et al., 2018b; Mathur & Kasper, 2019; Ng et al., 2019; Woodyard & Robb, 2016; Arifin, 2018; Atlas et al., 2019; Dale, 2015; Etikan et al., 2016; Kirbiš Škreblin et al., 2017; Younas et al., 2019).

Demographic variables, such as income, age, education, and ethnicity, also play a significant part in determining financial satisfaction. For instance, Joo and Grable (2004) emphasize the relevance of income and education in shaping positive financial behaviours, which, in turn, enhance financial satisfaction. Attaining financial satisfaction involves effective money management behaviours, particularly as individuals progress through stages of behavioural change (O’Neill et al., 2000). When individuals are prepared to tackle financial challenges, they may replace negative behaviours, such as overspending, with positive actions like saving and investing. These positive changes are more likely to succeed when people exhibit qualities like determination, discipline, knowledge, and an optimistic mindset.

These qualities are essential for managing common financial behaviours, such as cash management, credit usage, and saving, which are fundamental elements of financial planning. Good financial practices across personal finance basics (borrowing, saving, investing, and risk management) contribute significantly to attaining a healthy state of financial well-being (Huston, 2010). Indeed, financial satisfaction has captured the attention of researchers globally due to its broad implications for financial well-being (Etikan et al., 2016; Lee et al., 2017).

Various methods have been employed to measure financial satisfaction, including both single-item and multi-item approaches. Single-item measures often ask general questions like "How satisfied are you with your financial situation?" (Morgan, 1992) or "How comfortable and well-off are you financially?" (Greenley et al., 1997). Most studies use Likert scale questions to gauge satisfaction with living standards (Boateng, 2016) or self-anchoring scales such as the 10-point stair-step question used by Joo and Grable (2004). In contrast, multi-item measures consider several key components indicative of financial well-being, taking into account how one subjectively views their financial adequacy, economic situation, and quality of life (Draughn et al., 1994). Expanding on these measures, Hira and Mugenda (1998) identified six dimensions of financial satisfaction: current financial situation, savings, debt, skills in financial planning and the capacity to attain future goals and preparedness for emergencies. These dimensions provide a comprehensive view of financial satisfaction, connecting it to broader financial practices and behaviours.

2.2.4 Financial Socialisation

Socialisation is the lifelong process through which individuals acquire the knowledge, skills, and values necessary to participate effectively within a group or society (McNeal, 1987; Moschis, 1987). In the context of consumer behaviour, it involves the acquisition of relevant skills, attitudes, and knowledge for operating in the consumer market (Ward, 1978). Financial socialization, on the other hand, encompasses a broader spectrum, extending beyond marketplace interactions to include the acquisition of behaviours, attitudes, standards, knowledge, values, and norms that contribute to personal financial well-being and viability (Allsop et al., 2021; Damian et al., 2020; Danes, 1993; Jorgensen & Savla, 2010).

Key agents of consumer and financial socialization include parents, peers, media, and schools, as identified by the literature (LeBaron et al., 2018; Moschis, 1987; Moschis & Churchill Jr, 1978; Shim et al., 2010). These agents play significant roles in shaping individuals' understanding and engagement with consumer and financial matters from childhood through adulthood. Hilgert et al. (2003) find that households that gained financial knowledge from both personal networks, like friends and family, and through media sources like television, radio, and the internet, tended to perform better in financial management practices, as reflected in their higher index scores.

Research indicates that the family plays the most influential role in financial socialization (Shim et al., 2010), and unconscious socialization within the family is positively linked to both subjective financial literacy and financial behaviour (Deenanath et al., 2019). Parents serve as key educators in shaping children's understanding of consumption, as noted by Moschis (1987). Before children even start school, they have already gained knowledge, attitudes, and motivations related to consumer behaviour, largely due to parental influence, according to Kuhlmann (1983) and Moschis (1987). Moschis and Churchill Jr, (1978) further suggest that positive reinforcement from parents can foster effective consumer behaviours, while negative support may hinder the development of consumer knowledge.

Gudmunson and Danes (2011) proposed a framework explaining how family socialization impact financial behaviour. Their model posits that, personal and family traits influence family interactions, relationships, and intentional financial socialization efforts. These factors, in turn, shape financial attitudes, knowledge, and capabilities, which then lead to financial behaviours. Ultimately, these behaviours influence financial well-being, which is considered the ultimate goal of family financial socialization, surpassing the importance of just knowledge or behaviour alone. Similarly, Metcalf and Atance (2011) find that developing good financial habits during childhood equips adults with better skills for managing their finances later in life. Their findings further indicates that children between the ages of 10 and 14 grasp basic concepts such as retirement, while more complex financial concepts are typically learned after age 14. Several studies have confirmed a link between financial understanding in childhood and its continuity into early adulthood (Friedline et al., 2013). Parents with strong money management skills significantly shape their children's financial behaviours in adulthood. Research, including a cross-cultural study by Hershey et al. (2010), shows that early financial lessons from parents can help children develop a long-term financial perspective as they enter adulthood. Likewise, Grinstein-Weiss et al. (2012) highlighted the importance of parents in cultivating financial skills and abilities in their children. Norvilitis and MacLean (2010) reported that college students who received practical financial education from their parents tended to have less debt and used credit cards less frequently. Similarly, McNeill and Turner (2013) reported that young adults' financial attitudes and behaviours were closely tied to the financial education learned from their parents, with parental influence often continuing even after the child moved out and became financially independent. Other studies support this, showing that childhood financial socialization positively correlates with good financial practices and owning assets in young adult life (Kim & Chatterjee, 2013) and that access to personal financial information enhances children's financial knowledge and behaviours (Mimura et al., 2015).

Peer groups are another important factor in financial socialization. Moschis and Churchill Jr, (1978) highlighted that peers influence the desire for material possessions and motivations for social belonging. Lin and Lee (2002) observed that younger individuals who felt less financially knowledgeable were more inclined to seek advice from friends when making investment decisions. Additionally, Loibl and Hira (2006) argued that men were more likely than women to rely on co-workers for financial planning information. Collectively, these studies illustrate how peer influence extends across different settings and demographics, shaping financial decision-making in nuanced ways.

The media plays a key role in financial socialization, influencing purchasing decisions, including investment choices. Punj and Staelin (1983) noted that by seeking information, consumers can find products that offer better value and greater satisfaction. Lin and Lee (2002) discovered that factors like subjective knowledge, risk tolerance, age, and income significantly impact whether consumers use media as a source of financial information. Lee and Cho (2005) examined how individuals utilize intermediaries to access and interpret information and found that many rely on marketing materials for financial market insights, with about half of those who paid for advice turning to the media. Rhine and Toussaint-Comeau (2002) highlighted that lower-income, less-educated adults particularly favoured newspapers and magazines for personal finance information.

The workplace also serves as a significant environment for financial socialization. Financial education for adults extends beyond traditional classrooms and does not necessarily involve formal teachers. Loibl and Hira (2005) found that co-workers contribute to financial learning, with workplace educational resources enhancing financial knowledge. Their study analysed the effects of self-initiated financial learning through resources such as employer-provided newsletters, financial publications, planning software, and the Internet. The findings indicated that company newsletters were the most commonly utilized educational tool. Similarly, Alexander et al. (1998) found that many mutual fund shareholders relied on employer-provided printed materials as their primary information source for investment decisions.

2.2.5 Financial Literacy

Financial literacy involves the skill to effectively handle financial resources over a lifetime, enhancing financial well-being (Hung et al., 2009). It involves a deep understanding of key financial areas and the ability to apply that knowledge in personal financial management (Remund, 2010). This includes making informed decisions about both short-term finances and long-term planning, while considering life events and economic changes. Huston (2010) emphasizes that financial literacy is a combination of financial understanding and practical application, which leads to better financial decisions and behaviours. Financial literacy also implies that individuals who understand financial matters are more likely to make prudent financial decisions and take appropriate actions to meet their future financial needs (Brounen et al., 2016; Mandell & Klein, 2009).

Furthermore, financial literacy is not just about knowledge; it is about applying that knowledge to personal financial issues (Marsh, 2006). Pankow (2003) defines financial literacy as the competence to perform rational and informed actions in financial management. The higher a person's financial literacy, the better they are at understanding and addressing financial problems. This knowledge enables individuals to make well-considered decisions about the what, how, why, where, and when of financial matters. As individuals apply these skills in everyday life, they are more likely to achieve success and satisfaction, leading to an improved quality of life.

Given its critical role, financial literacy has been a cornerstone of financial education, aimed at improving decision-making and financial outcomes for individuals and communities. As financial responsibilities shift more to individuals in increasingly complex environments, the focus on improving financial literacy remains strong. However, empirical studies often rely on subjective or objective measures that may not fully capture the comprehensive knowledge expected in educational curricula (Butcher, 2004). For example, in New Zealand, financial literacy assessments include questions on investment, interest rates, savings, and personal debt—areas that previous studies have often overlooked (Agnew & Harrison, 2015; Matthews & Stangl, 2013). This broader approach highlights the evolving understanding of financial literacy, highlighting its role in navigating complex financial landscapes.

Scholars argue the critical role of financial literacy in shaping the financial behaviours of households and individuals (Cupák et al., 2019). Niu et al. (2020) highlighted the strong positive impact of financial literacy on retirement preparation among Chinese individuals, such as their ability to evaluate retirement financial needs, establish long-term financial objectives, and obtain private pension insurance.. Lusardi and Mitchell (2011a) proposed a theoretical model to examine how financial literacy influences retirement savings decisions, pointing to the critical role of financial concepts like survival rates, discount rates, returns, and inflation in supporting sound retirement decision-making. In a subsequent study, Lusardi and Mitchell (2017) stressed the importance of learning about risk diversification, the relationship between risk and return, interest rates, and financial asset movements to make informed decisions about retirement and investments. Research has consistently shown that individuals with higher financial literacy are more likely to plan and save for the future (Banks & Oldfield, 2007; Grable & Lytton, 1997; Hershey et al., 2007; Kimiyagahlam et al., 2019; Lusardi & Mitchell, 2008)

According to Gaudecker (2015), households demonstrating strong financial literacy tend to hold diversified investment portfolios, which helps them minimize losses when diversifying. Studies by Li et al. (2020) and Van Rooij et al. (2011) demonstrated that stock market participation and the effective management of risky assets are positively associated with financial literacy and cognitive capacity. Hsiao and Tsai (2018), using data from Taiwan's National Survey, found that financial literacy significantly lowers the barriers to purchasing complex financial products, even after accounting for stock market participation rates. Deuflhard et al. (2019) further showed that high financial literacy can lead to higher returns on savings accounts. Yang et al. (2023) discovered that financial literacy plays a significant role in encouraging the adoption of digital financial services, such as mobile payments and online lending. Additionally, Disney and Gathergood (2013) found that financially literate individuals tend to use lower-cost credit and make timely credit card payments, as shown by Fong et al. (2021). These financial behaviours, influenced by literacy, have direct implications for retirement planning and saving decisions, including asset investment strategies.

A lack of financial literacy often results in poor financial decisions for households (Maziriri et al., 2018). In contrast, a financially literate person is equipped to save efficiently, borrow responsibly, invest with purpose, manage spending, and make calculated risk decisions (Atkinson & Messy, 2012; Grohmann et al., 2014). Insufficient financial literacy and information can significantly impede an individual's ability to save and plan for a secure retirement (Sarpong-Kumankoma, 2023). Without a solid grasp of basic financial concepts, "individuals are less likely to engage in effective retirement planning or accumulate wealth, jeopardizing their financial well- being" (Lusardi, 2008). Although some may seek guidance from financial advisors, the pervasive lack of financial knowledge remains a substantial barrier. This deficiency not only undermines personal welfare but also diminishes market efficiency and reduces the effectiveness of economic models used to inform policy- making and understand consumer behaviour (Hastings, S. Justine, Madrian, C. Brigette, Skimmyhorn, 2016).

Other studies on financial literacy consistently shows that women typically possess lower levels of financial literacy than men. Lusardi and Mitchell (2014) found that women are significantly less financially literate and more likely to select "do not know" responses than men. Cheng et al. (2011) observed that women tend to pay higher loan costs, attributing this to differences in behaviour, such as being less likely to search for the lowest interest rates. Mahdavi and Horton (2014) further highlighted that even among highly educated women, financial literacy levels remain low, based on a large sample of graduates from a prestigious U.S. college.

The primary issue with low financial literacy is that it can lead to poor financial decisions, such as over-indebtedness, potentially resulting in bankruptcy (Santos & Abreu, 2013). Similarly, financially illiterate individuals may miss out on investment opportunities for their idle money. As financial products grow increasingly complex with global progress, a higher level of financial literacy becomes essential for effective savings planning, helping individuals achieve financial stability and satisfaction (Ali et al., 2015).

Financial literacy levels are generally low and differ widely across the globe (Lusardi & Mitchell, 2011a). Notably, many Americans lack basic financial knowledge, particularly in understanding concepts like inflation, interest compounding, and risk diversification (Lusardi & Mitchell, 2011b). Similarly, in Africa, financial literacy is also often limited, with many individuals struggling with basic financial concepts and practices. Deaton (1989) argues that because saving and investment patterns are influenced by context-specific elements like family size, education levels, demographics, income potential, and national policies, the applicability of findings from one study to other contexts is limited (Agarwal et al., 2015). Lower levels of financial literacy are often associated with a reduced tendency to prepare for future financial needs (Lusardi & Mitchell, 2011b; Van Rooij et al., 2011).

Financial literacy is crucial for empowering and educating consumers, allowng them to make informed financial decisions relevant to their lives (Wachira & Kihiu, 2012). According to Greenspan (2002), being financially literate enables individuals to manage household finances effectively, begin saving routines, and make well-informed investment decisions. When applied effectively, this knowledge enables individuals to meet financial responsibilities through careful planning and efficient use of resources, ultimately enhancing their financial well-being (Wachira & Kihiu, 2012).

2.2.6 Mental Accounting

Tversky and Kahneman (1981) conducted a study that provided empirical evidence for the concept of "psychological accounting" in financial decision-making. In their theatre-ticket study, participants were asked if they would pay an additional $10 for a theatre ticket after experiencing the loss of either a $10 bill or a pre-sale theatre ticket of similar value. They found that participants who experienced the loss of a $10 bill were more willing to buy another ticket compared to those who lost the pre-sale ticket. This discrepancy suggests that losses occurring within specific spending categories (such as entertainment expenses) influence further spending within the same category more significantly than losses without a specific label. This finding contradicts the economic principle of fungibility, which assumes that money has no inherent labels. Henderson and Peterson (1992) further explored this observation, suggesting that spending decisions are influenced by how people categorize expenses and mentally structure their budgets. Thaler (1985) expanded upon this idea, developing a descriptive theory of consumer choice known as mental accounting. He defines it as the cognitive processes individuals and households employ to manage their finances, including organizing, assessing, and tracking their assets, which are mentally categorized into different accounts. The primary significance of the theory lies in its ability to explain individual economic behaviour, particularly through the core assumption that income and spending are grouped into distinct mental accounts (Muehlbacher et al., 2017). By committing to specific budgets for categories like "Food", "Rent" or "Entertainment", individuals can maintain better control over their expenses. An individual's intention to manage expenses and boost savings leads to the creation of mental accounts, which is advantageous for investors with imperfect self-control (Statman, 1999).

Mental accounting leads individuals to treat different sums of money distinctly by mentally categorizing them into separate accounts, based on factors like how the money was obtained (e.g., through work, winnings, or inheritance) or how it is intended to be used (e.g., for practical needs versus luxury items) (Silva et al., 2023). The concept of framing is crucial in analysing mental accounting because, as behavioural research suggests, preferences are often shaped during the decision-making process, heavily influenced by how choices are presented (Alevy et al., 2015). Mental accounting processes are theorized to three distinct purposes: simplifying decision-making, maintaining self-control attractive spending options, and maximizing hedonic pleasure from the outcomes of financial decisions (Antonides & Ranyard, 2017; Thaler, 1999; Zhang & Sussman, 2018).

The outcomes of mental accounting practices have been extensively studied, showing significant influences on various financial behaviours. Research indicates that a strong focus on mental accounting positively affects expense and money management (Antonides et al., 2011). Additionally, mental accounting related to tax obligations has been linked to tax compliance (Muehlbacher et al., 2017; Muehlbacher & Kirchler, 2013), although later studies found that this correlation holds true only for specific subscales of the mental accounting measure (Olsen et al., 2019a).

Beyond outcomes, mental accounting has also been studied in relation to sociodemographic factors. Females, for example, are more likely to engage in mental accounting, although this gender effect was not observed consistently across all studies (Antonides et al., 2011; Muehlbacher & Kirchler, 2013; Olsen et al., 2019a). The relationship between age and mental accounting is also mixed, with some studies finding a positive correlation, while others report no significant relationship (Antonides et al., 2011; Muehlbacher & Kirchler, 2013). Wealth has been found to negatively correlate with mental accounting, whereas income shows a positive correlation (Muehlbacher & Kirchler, 2013; Olsen et al., 2019). Financial scarcity, meanwhile, negatively correlates with mental accounting and can act as a moderator for certain mental accounting phenomena, although no moderation effect was found in the context of the theatre-ticket problem (Shah et al., 2015). Higher education and better math performance are associated with less engagement in mental accounting (Abels & Guven, 2016; Antonides et al., 2011), and the number of employees has a negative relationship with mental accounting among self-employed entrepreneurs (Muehlbacher & Kirchler, 2013).

Mental accounting is also influenced by an individual's attitudes, knowledge, skills, and personality traits. Mental accounting related to tax payments is positively associated with favourable tax attitudes, tax knowledge, and self-assessed financial literacy (Muehlbacher & Kirchler, 2013; Olsen et al., 2019; Antonides et al., 2011), although objective financial literacy does not appear to be related (Olsen et al., 2019). Time orientation plays a role as well, with a near-future focus negatively related to mental accounting and long-term orientation positively related (Antonides et al., 2011; Olsen et al., 2019). Impulsivity, characterized by rapid, unplanned actions, is hypothesized to be negatively associated with mental accounting due to its connection with low self-control (Antonides & Ranyard, 2017), and while this hypothesis has not been extensively tested, some evidence supports it (Olsen et al., 2019).

Further studies explore the relationship between mental accounting and broader psychological traits, such as those encompassed by the Big Five personality traits (McAdams & Pals, 2006). Traits like extraversion, agreeableness, conscientiousness, emotional stability, and openness have been studied in various decision-making contexts, but their link to mental accounting requires further exploration. Conscientiousness, in particular, has been associated with better financial management due to its connection with a future-oriented mindset (Donnelly et al., 2012), although its relationship with mental accounting remains uncertain when accounting for other factors like time orientation and impulsivity (Olsen et al., 2019).

The influence of mental accounting extends to how individuals mentally represent, categorize, and frame financial decisions. For instance, research by Choi and Coulter (2012) demonstrates how consumers assess a discounted price by referencing a specific value, either as a fixed monetary amount or as a percentage difference. Similarly, Reinholtz et al. (2015) explore how the categorization process in mental accounting shapes consumption behaviour, with significant implications for framing and communication strategies in marketing.

Studies have also examined how thinking styles and payment periodicity influence mental accounting. Atlas et al. (2019) examined how presenting prices periodically versus annually influences consumers' intentions to purchase, Hossain (2018) investigated how consumer behavior varies depending on whether individuals adopt an analytical or holistic thinking style. Kim and Tanford (2021) examined how unexpected discounts affect additional purchases, highlighting individual differences in pricing responses.

Finally, research has delved into the relationship between mental accounting and self-control, particularly in the context of goal-setting and financial decision-making. Koch and Nafziger (2016) investigate how narrow versus wide mental accounts affect self-control, and Lian (2021) analyses decision-making through the lens of narrow thinking theory, capturing the difficulty decision-makers face in coordinating multiple decisions.

2.2.7 Financial Cognition

An individual's financial cognitive is crucial in their human capital, directly influencing their household income. Yeo et al. (2023) describe it as a process by which individuals develop their beliefs, attitudes, and behaviours regarding financial decision-making. They further argue that having the cognitive capacity to make financial decisions is essential for engaging in financial planning. Without this capability, individuals may struggle to develop sound financial plans, which can hinder their intention and ability to form appropriate financial behaviours. However, unequal access to financial knowledge exists due to factors like regional stability, economic development, and personal education levels. Rural areas exhibit distinct characteristics in these aspects, often facing greater challenges in accessing financial resources and education (Zou et al., 2021). Research on financial cognitive levels primarily concentrates on two key aspects. Firstly, it examines variations in financial cognitive levels among individuals. Secondly, it investigates how these cognitive levels influence inclusive finance. Factors such as individual characteristics, life expectancy, and internet proficiency significantly correlate with financial cognitive levels (Mouna & Anis, 2017). Individual characteristics, particularly risk appetite, serve as indicators of cognitive disparities among different groups, reflecting varying attitudes towards financial investment (Croce et al., 2020).

Research has consistently highlighted the crucial role of cognitive skills in influencing decision-making processes. Hayes and Allinson (1994), Hunt et al. (1989) and Leonard et al. (1999) identified cognitive abilities as key determinants of economic decisions, particularly in increasing individuals' risk-taking capacities (Dohmen et al., 2010). Cognitive components, although difficult to predict, significantly affect beliefs, judgment, and thoughts (McGuire, 1985; Zajonc, 1980). Studies by Agarwal and Mazumder (2013) and Benjamin et al. (2013) further support the idea that cognitive skills are vital in financial decision-making, emphasizing the importance of cognitive support in reducing behavioural biases in investment decisions (Bhandari et al., 2008).

The literature also underscores the impact of family financial culture and financial socialization on shaping financial attitudes (Masuo et al., 2004), which in turn influence financial behaviour (Joo & Grable, 2004). Risk attitude is a crucial factor affecting financial decisions, particularly in portfolio choices and asset accumulation for retirement (Lusardi & Mitchell, 2011). It has been observed that individuals with higher incomes are generally more inclined to engage in financial risk-taking than their lower-income counterparts. (Cicchetti & Dubin, 1994).

Financial knowledge plays a significant role in improving financial behaviour (Fox et al., 2005) and decision-making (Benartzi & Thaler, 1995). It also motivates individuals to engage in budgeting, saving, and future planning (Perry & Morris, 2005).Cognitive skills are regarded as the key factor influencing household decisions on asset accumulation(Smith et al., 2010). Mahapatra et al. (2019) extended the concept of financial cognition, identifying it as a second-order factor composed of financial attitude, risk attitude, and financial knowledge. The influence of these factors on financial behaviour and decision-making has been well- supported by previous research (Joo & Grable, 2004; Shavit & Adam, 2011; Lusardi, 2011; Perry & Morris, 2005; Fox et al., 2005). These variables collectively influence financial behaviour and decision-making processes, highlighting the importance of cognitive skills in achieving desirable financial outcomes (Joo & Grable, 2004; Mahapatra et al., 2019; Perry & Morris, 2005; Shavit & Adam, 2011).

Attitude, as defined by Eagly (1993), is a mental state characterized by a person's positive or negative evaluation of a specific object or entity. Armitage and Conner (2001) highlighted the significant role of attitudes in shaping intentions within the context of the theory of planned behaviour, alongside subjective norms and perceived behavioural control. Financial attitudes are critical in this context, as they encompass an individual's values and opinions on personal financial topics, such as the importance of saving money (Hassan et al., 2016). Godwin (1994) identified financial attitude as a key factor influencing cash flow management, while Shockey (2002) described financial attitude as an integration of concepts, knowledge, and emotions that together foster a readiness to respond favourably.

Research by Joo and Grable (2004) confirmed that a person's financial behaviour is significantly influenced by their financial attitude. Furthermore, family financial culture and financial socialization play an essential role in shaping these attitudes (Masuo et al., 2004), as does financial learning derived from parents' financial behaviours and individual financial literacy (Shim et al., 2010). This aligns with Fu et al. (2010), who concluded that understanding an individual's attitude is crucial for predicting their intentions and behaviours.

Moreover, financial attitudes have been consistently linked to financial literacy and planning. Positive financial attitudes, such as valuing money management and saving, are associated with better financial outcomes, including higher savings and greater financial security for individuals and their families (Hassan et al., 2022). These attitudes also contribute to sustainable financial planning and increased savings intentions (Mohidin et al., 2013; Talib & Manaf, 2017). For instance, a study conducted in Malaysia by Hassan et al. (2016) found a positive relationship between financial attitude and retirement planning, further emphasizing the importance of financial attitudes in shaping long-term financial behaviour.

Risk attitude is a critical concept in understanding financial behaviour, as it shapes how individuals approach decision-making under uncertainty. Kahneman (1979) studied how risk attitudes differ between gains and losses, finding that investors tend to be risk-averse when facing gains but become risk-seekers when dealing with losses. Cicchetti and Dubin (1994) concluded that individuals with higher incomes generally have a more positive attitude toward financial risk-taking compared to those with lower incomes; and Bromiley and Rau (2010) highlighted that risk-taking behaviour is influenced by both specific situations and individual characteristics. Weber et al. (2002) developed a risk attitude scale encompassing five domains: financial decisions related to investment and gambling, recreational decisions, ethical decisions, health and safety and social decisions, supporting the idea that risk attitude is domain-specific. Lusardi and Mitchell (2011) emphasized that risk attitude plays a vital role in shaping financial decisions, particularly in determining portfolio choices and asset accumulation for retirement.

Financial knowledge encompasses awareness and comprehension of financial matters, which is vital for making well-informed financial choices (Huston, 2010). It includes the ability to comprehend and apply information related to personal finance management, such as saving, investing, budgeting, credit management, and retirement planning. Financial knowledge equips people to make informed decisions about their money, assess financial risks, and effectively plan for their financial future. Individuals with strong financial knowledge are less likely to make impulsive financial choices and more likely to manage their finances wisely, with a future-oriented mindset (Lind et al., 2020). High financial knowledge is associated with a positive financial attitude, leading to better financial management and planning. Additionally, financial self-efficacy, or confidence in handling finances, is enhanced by a strong foundation in financial knowledge, as noted by Amanah et al. (2016) and Yong et al. (2018). Financial knowledge is a crucial factor in retirement planning, as studies have shown that individuals with a firm grasp of financial concepts are more likely to create retirement plans earlier and approach the process more rationally (Lusardi & Mitchell, 2008). This knowledge is crucial for achieving financial stability and long-term financial well-being (Archuleta et al., 2021; Mudzingiri et al., 2018; Radianto et al., 2022).

2.3 Conceptual Framework

The study's framework is based on the factors outlined in the theory of financial planning behaviour and prior research with objectives similar to those of the current study (Kimiyagahlam et al., 2019; Magwegwe & Lim, 2021; Nosi et al., 2017). The framework, illustrated in Figure 2.1, illustrates the relationships between the key constructs examined in the study. Theoretically, the theory of financial planning behaviour explains the relationship between retirement planning intentions and retirement planning behaviour and the established factors. Building on this model, the framework identifies the factors expected to directly influence retirement planning intentions and indirectly shape the actual retirement planning behaviour.

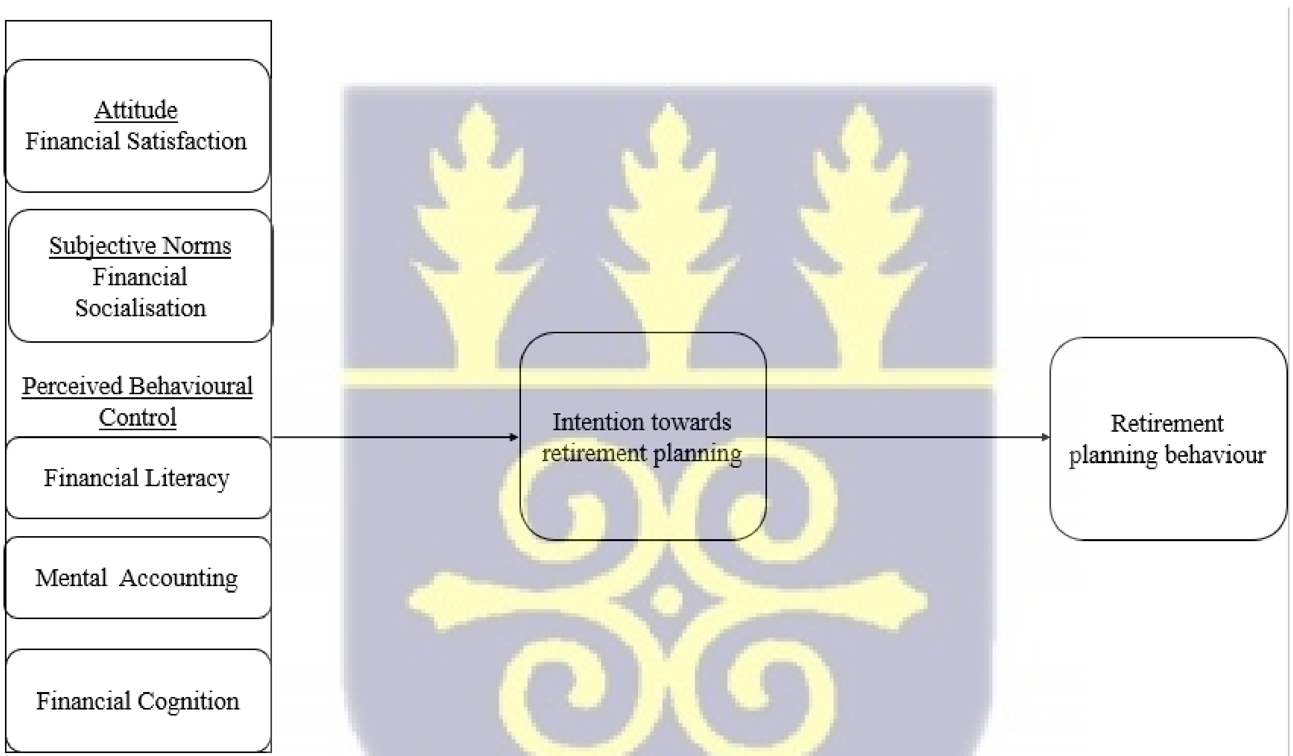

Figure 2.1: Conceptual Framework

The hypotheses below are formulated based on the relationships outlined in the conceptual framework:

H1: *Financial satisfaction has a positive and significant effect on retirement planning intentions*

H2: *Financial socialisation has a significant and positive effect on retirement planning intentions*

H3: *Financial literacy has a positive and significant effect on retirement planning intentions*

H4: Financial literacy has a positive and significant effect on financial satisfaction

H5: Financial literacy has a positive and significant effect on mental accounting

H6: Financial literacy has a positive and significant effect on financial cognition

H7: *Mental accounting has a positive and significant effect on retirement planning intentions*

H8: *Financial cognition has a positive and significant effect on retirement planning intentions*

H9: Retirement planning intentions have a positive and significant effect on retirement planning behaviour

H10: *Retirement planning intentions have a significant mediation effect between the independent variables and retirement planning behaviour*

2.4 Hypotheses Development

2.4.1 Financial Satisfaction and Retirement Planning Intentions

Financial satisfaction is often linked to an individual's perceived financial well-being, encompassing their contentment with income, savings, and overall financial situation. Research indicates that financial satisfaction can enhance psychological well-being, which in turn influences long-term planning behaviours, including retirement planning. According to Joo and Grable (2004), financial satisfaction is a strong predictor of financial behaviour, including planning for future financial needs. Prawitz and Cohart's (2016) study focuses on the relationship between financial management competency, financial satisfaction, and well-being, reinforcing the link between financial satisfaction and proactive financial behaviours; and Yeo et al. (2023) indicate that financially, satisfied individuals will develop a positive disposition towards financial planning. Higher levels of satisfaction could encourage individuals to take more initiative in planning for financial stability, as individuals with a sense of financial satisfaction are generally more likely to have a positive outlook on their financial future, thereby increasing their motivation to plan for retirement. As a result, we hypothesize in this study that:

H1: *Financial satisfaction has a positive and significant effect on retirement planning intentions*

2.4.2 Financial Socialisation and Retirement Planning Intentions

Financial socialization is the means by which people learn financial knowledge, develop attitudes, and adopt behaviors by engaging with social influences like family, friends, and media. Bandura's, (1977) Social Learning Theory suggests that individuals learn behaviours by observing and emulating others. Research has shown that initial financial socialization experiences, particularly those involving parental influence and education, significantly impact financial attitudes and behaviours in adulthood, including retirement planning (Shim et al., 2010). Positive financial socialization fosters a proactive approach to financial planning, including the intention to secure financial stability through retirement planning. Kimiyaghalam et al. (2017) and Metcalf and Atance (2011) also find that parents influenced their children's attitude toward retirement and savings. Hence, we hypothesize that:

H2: *Financial socialisation has a significant and positive effect on retirement planning intentions*

2.4.3 Financial Literacy and Retirement Planning Intentions

Financial literacy encompasses the knowledge and application of various financial skills, such as managing personal finances, budgeting, and making investment decisions. Financially literate individuals are more likely to avoid spending beyond their monthly income, allowing them to accumulate savings that can support them when their income decreases, particularly in retirement. Moure's (2016) study in Chile highlighted a strong positive link between financial literacy and effective retirement planning.

Kimiyaghalam et al. (2017), Lusardi and Mitchell (2011) and Prast and van Soest (2016) emphasize that financial literacy is a key variable influencing retirement planning decisions and financial decision making (Agarwal et al., 2015). People with higher financial literacy are prone to understanding the importance of saving and investing for retirement, leading to stronger retirement planning intentions. This knowledge allows individuals to make informed decisions that align with their long-term financial goals, thereby enhancing their intention to engage in retirement planning. The study therefore hypothesizes that:

H3: Financial literacy has a positive and significant effect on retirement planning intentions

2.4.4 Financial Literacy and Financial Satisfaction

Financial literacy contributes to improved financial decision-making, which can lead to better financial outcomes and greater financial satisfaction. Research shows that individuals possessing greater financial literacy are more inclined to handle their finances responsibly, avoid debt, and increase their savings, all of which contribute to higher levels of financial satisfaction (Xiao et al., 2014). Other studies also identify that financial literacy and positive financial knowledge contribute to financial satisfaction (Ali et al., 2015; Coşkuner, 2016; Falahati et al., 2012; Hasibuan et al., 2018). This relationship highlights the importance of financial education in fostering a sense of financial well-being and contentment. In line with these studies, this study hypothesizes that,

H4: Financial literacy has a positive and significant effect on financial satisfaction

2.4.5 Financial Literacy and Mental Accounting

Mental accounting plays a vital role in helping individuals plan for future financial needs and handle unexpected financial challenges (Yeo et al., 2023). Despite its importance, there are still areas to improve for optimal financial decision-making. It is essential to incorporate mental accounting into personal financial planning by assessing individuals' spending and saving habits. Shahrabani's (2012) study found that individuals with high financial literacy are more likely to have strong intentions to control their budgets, establishing a positive link between budgeting intentions and financial knowledge. Similarly, Selvadurai et al. (2018) examined financial literacy education and retirement planning in Malaysia, highlighting that mental accounting is strongly linked to financial literacy. They noted that financial literacy can improve mental accounting by influencing individuals' behaviours in saving and spending. As a result, those with financial literacy education are more prone to avoid overspending and achieve long-term savings. The relationship between mental accounting and financial literacy is essential and well-established. Accordingly, this study hypothesizes that:

H5: Financial literacy has a positive and significant effect on mental accounting

2.4.6 Financial Literacy and Financial Cognition

Financial cognition involves the mental processes used to understand, process, and apply financial information. Financial literacy plays a vital role in enhancing financial cognition by providing individuals with the knowledge and tools necessary to analyse financial situations and make informed decisions. Research by Van Rooij et al. (2011) shows that individuals with higher financial literacy exhibit better financial cognition, which leads to more effective financial planning, including retirement planning.

While there is a strong relationship between financial cognition and financial literacy, cognitive biases can still influence financial decision-making. Agarwal and Mazumder (2013) highlight that people with limited cognitive abilities are more likely to experience difficulties in making financial decisions, underscoring the importance of both financial literacy and cognitive skills in achieving sound financial outcomes. Therefore, this study hypothesizes that:

H6: Financial literacy has a positive and significant effect on financial cognition

2.4.7 Mental Accounting and Retirement Planning Intentions

Mental accounting plays a relevant role in how individuals perceive and manage their finances, which can directly impact their retirement planning intentions. By categorizing funds and setting aside resources for specific purposes, individuals with strong mental accounting skills are more likely to set aside money for retirement savings. Hardin and Looney (2012) find that mental accounting, the tendency to treat money differently depending on its source or intention, also played a significant role in shaping their savings goals and long-term investment decisions. Research by Soman (2004) suggests that effective mental accounting can lead to better financial decisions, including the commitment to long-term financial goals like retirement planning. Similarly Choi (2015) find that mental accounting influenced how individuals perceived and managed their contributions, often leading them to compartmentalize their savings in ways that were not always optimal. Similar to these studies, the current study hypothesizes that:

H7: Mental accounting has a positive and significant effect on retirement planning intentions

2.4.8 Financial Cognition and Retirement Planning Intentions

Financial cognition refers to the ability to understand, process, and apply financial information in decision-making. Strong financial cognition enables individuals to evaluate the prolonged benefits of retirement planning accurately, leading to more deliberate and intentional retirement planning behaviours. Yeo et al. (2023) indicate that cognitive biases are present and play a role in shaping financial decision-making. Agarwal and Mazumder (2013) also state that people with no cognitive ability have a greater propensity to face difficulties when making financial decisions. Findings from Mahapatra et al. (2022) also indicates a significant direct relationship between financial cognition and personal financial planning. Thus, the current study hypothesizes that:

H8: Financial cognition has a positive and significant effect on retirement planning intentions

2.4.9 The Relationship between Retirement Planning Intentions and Retirement Planning Behaviour

According to Ajzen's (1991) Theory of Planned Behaviour, intentions are the most immediate predictors of behaviour. In the context of retirement planning, strong intentions to plan for retirement are likely to result in concrete actions, such as saving, investing, and seeking professional advice. Empirical studies have consistently shown that individuals with strong retirement planning intentions are more likely to engage in behaviours that secure their financial future (Hershey et al., 2007). Yeung and Zhou (2017) find that preretirement planning activities, which are indicative of strong planning intentions, were associated with accumulating more retirement resources. This demonstrates that intentions to plan for retirement were followed by actual behaviours that resulted in better financial preparation. Noone et al. (2009) highlighted that individual who discussed retirement and had savings plans, reflecting their retirement planning intentions, reported higher retirement satisfaction and well-being. This indicates that their intentions led to concrete planning actions (behaviour), such as creating savings plans. Based on this evidence, the study hypothesizes that:

H9: Retirement planning intentions have a positive and significant effect on retirement planning behaviour

2.4.10 The Mediating Role of Retirement Planning Intentions

This hypothesis is grounded in the mediation model, where an independent variable influences an outcome variable through a mediator—in this case, retirement planning intentions. For example, financial literacy might not improve retirement planning behaviour directly but may do so by first enhancing intentions to plan for retirement. A study by Moorman and Matulich (1993) supports the idea that intentions serve as a key mediator, translating knowledge and attitudes into actual behaviour. Another study by Amim et al. (2017) found that Islamic financial planning intention serves as a mediator between Islamic financial planning attitude and subjective norms, and Islamic financial planning behaviour. This mediation effect underscores the importance of fostering strong retirement planning intentions to bridge the gap between financial literacy, satisfaction, socialization, cognition, mental accounting and actual planning behaviour. On this basis we hypothesize that:

H10: Retirement planning intentions have a significant mediation effect between the independent variables and retirement planning behaviour

Hypotheses 9 and 10 address Objectives 1 and 3, focusing on the link between retirement planning intentions and behaviour. Hypotheses 1, 2, 3, 7, and 8 address Objective 2 by examining factors influencing retirement planning intentions. Hypotheses 4, 5, and 6 support the model by showing how financial literacy influences key predictors of retirement planning intentions.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter outlines the processes and methods utilized to address the research objectives. It is divided into multiple sections.This chapter starts by examining the research paradigm, then outlines the research design, unit of analysis, and key aspects concerning the target population, sample size, and sampling method. It proceeds to discuss the nature and sources of the data collected, the structure of the questionnaire, and the approach used to measure the main constructs of the study. The chapter ends with an explanation of the data analysis method applied.

3.1 Research Paradigm

A research paradigm is the fundamental framework guiding a researcher's approach. It includes their beliefs, assumptions, and methodologies for understanding and gaining knowledge in a specific field of study**.** These foundational beliefs, values, and methodologies give rise to diverse paradigms. These paradigms serve as the fundamental philosophical frameworks that explain the criteria for what qualifies as rigorous research and dictate the appropriate methodologies applicable to such research activities (Myers & Avison, 2002). The definition of a research paradigm underscores its crucial role in the process of knowledge generation, shaping both the approach to research and the researcher's identity. Research across disciplines typically operates within paradigms, which embody underlying assumptions about the researcher's worldview and their criteria for truth. Multiple paradigms have emerged within social sciences research, incorporating perspectives such as positivism, interpretivism, realism, relativism, and critical realism (Kim & Garman, 2003; Myers & Avison, 2002; Orlikowski & Baroudi, 1991). However, the primary paradigms prevailing in business studies and related research, reflecting major theoretical orientations, are positivism and interpretivism (Saunders et al., 2009).

The positivist research paradigm, commonly associated with quantitative methodologies, postulates the existence of a singular, objective reality (Creswell & Creswell, 2023). Within this paradigm, reality is perceived as objective and divorced from social values, interests, and researcher biases. Epistemologically, positivists contend that knowledge is objective, devoid of temporal influences and contextual factors. Researchers aligned with positivism adopt a stance of neutrality, striving to minimize personal biases in their investigations (Lincoln et al., 2005). They maintain methodological distance from research participants to enhance the objectivity of data collection and analysis (Bell et al., 2022). Furthermore, positivists regard science as the preeminent means of knowledge generation, employing deductive reasoning to formulate and empirically test hypotheses within rigorously controlled scientific contexts (Boateng, 2016).

Interpretivism holds that diverse realities exist and are shaped by personal experiences and interpretations. In contrast to positivism, interpretivism views reality as socially constructed. Its epistemology posits that knowledge is subjective, bound by time, and contingent on context. Interpretivists generate knowledge by identifying different interpretations and constructions of reality, aiming to discern patterns. They typically employ an inductive logic approach to study phenomena. The current study aligns with the positivist perspective because it considers that the study objectives are most effectively examined within the framework of positivist philosophical assumptions. Additionally, the study aims to generalize its findings.

3.2 Research Design

The research design serves as a comprehensive structure and method for integrating various research components to achieve the study's objectives (Broadhurst et al., 2012). It outlines the procedures for conducting the study, including data collection, tools utilization, and data analysis. Consequently, the study design provides a consistent framework for inquiry, detailing how data will be collected, examined, and analysed to explicitly address the research objectives.

Creswell and Creswell (2023) refer to strategies and methods that move from broad assumptions to specific data gathering and analysis techniques as research designs. They propose that research design can be categorized into three main approaches: quantitative, qualitative, and mixed, depending on the research's nature. According to Denzin and Lincoln (2008), qualitative research allows researchers to interpret data based on people's perspectives, aiming to uncover what makes a situation unique. Various data collection methods for qualitative research include open-ended or guided interview methodologies, observation, individual interviews, focus groups, and participation (Boateng, 2016). Qualitative research includes various approaches such as case studies, grounded theory, ethnography, phenomenology, and narrative research (Creswell & Creswell, 2018).

In contrast, quantitative research design aims to provide evidence for a hypothesis by examining relationships among study variables. This type of research employs rigorous data assessment methods and structured data collection procedures. It can be experimental or non-experimental, quantifying variables and predicting causal relationships between them (Creswell & Creswell, 2023). Non-experimental designs describe phenomena, while experimental designs either confirm or refute the validity of a hypothesis. Additionally, Saunders and Lewis (2012) distinguish between descriptive and causal quantitative research designs, with descriptive research focusing on background and antecedents, while causal research explores cause-and-effect relationships.

The research employs a quantitative approach because it aligns with its objectives and philosophical assumptions. “It follows a deductive theory-based process, testing theories and hypotheses to understand relationships and distinctions among variables. Using the survey method, data is collected from respondents to analyse and interprt the study's constructs and their relationships. According to Yin (1994), for inquiries about "who" or "what", survey research methodology is deemed most appropriate”.

3.3 Unit of Analysis

The unit of analysis in a study constitutes the fundamental element or level of observation upon which empirical investigation is conducted within a research framework. Ellis and Levy (2009) define it as the amount of aggregate data gathered during a study. It represents the specific entity or unit of interest that serves as the primary focal point for data collection, analysis, and interpretation. This unit is carefully selected based on the research objectives, theoretical considerations, and the nature of the phenomenon under scrutiny. Common units of analysis encompass individual entities, such as persons, households, or firms, as well as aggregate entities like geographical regions, nations, or social groups. The designation of an appropriate unit of analysis is pivotal in shaping the scope, depth, and interpretative validity of research findings within the academic domain. This study specifically investigates the retirement planning behaviour of individuals within the informal sector. Thus, the research is centred on individuals, establishing the unit of analysis at the individual level.

3.4 Population and Sample Size

Population, as defined by Sarstedt et al. (2017), encompasses a comprehensive set of things or elements pertinent to a research study, serving as the source from which a sample for a research project could be derived. Lavrakas (2008) similarly characterizes population as the entirety of units examined by the researcher. For the study's purpose to be achieved, the population must exhibit similar traits (Panneerselvam, 2012). The target population of the study comprises urban informal sector workers in Ghana. These informal sector workers fall into two distinct categories: rural informal labour and urban informal workers. The present study specifically concentrates on the latter group, whose activities are classified within the domains of services, construction, and manufacturing.

Osei-boateng and Ampratwum (2011) conducted a study on the informal sector in Ghana, identifying that services include food traders,domestic workers, health workers, repairers, garages, graphic designers, audio-visual workers, hairdressers, and barbers, as well as private security personnel. Female workers predominate in food-related roles, often with limited education and skills acquired from family. Male-dominated roles, such as repairers and graphic designers, typically have basic formal education but limited vocational training. Job security and social protection are generally lacking across all service roles. Construction encompasses masons, carpenters, steel benders, plumbers, and electricians, who are predominantly young males, many of whom are school dropouts. While electricians may have basic training, other roles rely primarily on years of apprenticeship. In manufacturing, activities include food processing, textiles, garment production, woodworking, and metalworking. Women are prominent in food processing, while men dominate metal and woodworking. Apprenticeship is the primary mode of skill acquisition and employment in urban informal manufacturing units.

The variety of the population has the potential to enrich the data for this study, as most studies of a similar nature typically focus on a specific demographic. This research is among the few to gather responses from a broad population, which enhances its comprehensiveness and relevance.

3.5 Sampling Technique

Sampling methodology refers to the structured process of selecting a representative subset of individuals from a larger population (Taherdoost, 2018). "It entails the random selection of participants and subsequent data collection from them to represent the entirety of the population" (O'Reilly & Parker, 2013). Non-probability sampling, identified by Creswell and Creswell (2023) as one of the primary sampling methodologies, contrasts with probability sampling, where each unit within the population has an equal likelihood of being selected. Employing probability sampling techniques serves to significantly mitigate researcher biases, albeit often accompanied by heightened financial expenses (Taherdoost, 2018). Common probability sampling methods include stratified random, cluster, simple random, multi-stage, and systematic sampling. Non-probability methods include quota, snowball, convenience, and purposive sampling (Taherdoost, 2018). The selection of the sampling method is determined by the research design, with quantitative studies typically employing probability sampling and qualitative studies favouring non-probability sampling.A carefully choseen sample is crucial for research, as it aims to generalize population characteristics for the study's subject. Therefore, the sampling methodology is vital for ensuring accurate data collection and drawing meaningful conclusions about populations (O'Reilly & Parker, 2013).

The study used purposive sampling, a method where units are chosen based on characteristics related to the research topic. This approach helps the researcher focus on specific aspects relevant to the study objectives.

3.6 Data and Sources of Data

For analysis, the research utilized primary which is data obtained firsthand by the researcher to fulfill the study's goals. Questionnaires were utilized as the key data collection tool to obtain information from urban informal sector workers in Accra, Ghana. When effectively designed and administered, questionnaires enable consistent measurement of responses across a large sample of participants, which is essential for studies requiring a substantial sample size. Conversely, secondary data was employed to construct the literature review, serving as a reference point for the current research.

3.7 Questionnaire Design

In this study, a self-report Likert scale questionnaire was utilized, where respondents selected a figure on the scale to reveal the extent to which a statement applied to them. Data collection was done through both a self-administered paper-and-pencil questionnaire and an online version created using Google Forms. The questionnaire comprised two sections: Section A and Section B. Section A gathered demographic and professional information from respondents through five questions covering gender, age, educational level, occupation type, and years of experience.

Section B focused on the study's factors, graded on a seven-point Likert scale. It began with questions about respondents' perspectives on variables influencing their retirement planning behaviour and retirement planning intentions. Additionally, respondents indicated their agreement with statements regarding financial satisfaction, financial socialization, financial literacy, mental accounting, and financial cognition. Each question was prefaced to clarify the information sought and minimize ambiguity. *The questionnaire used for data collection is provided in the Appendix.*

3.8 Measurement of Study Constructs

The study utilized scales from prior research to measure its key variables. Additionally, some of these scales were adapted to better fit the specific context of the study and to accurately align with its objectives..

3.8.1 Retirement Planning Behaviour Questionnaire

Retirement Planning Behaviour was measured using the preparing for retirement scale developed by Noone et al. (2010). The scale measures participants' current health, work status, and retirement plans, confirming the relevance of four domains of retirement planning: financial, health, lifestyle, and psychosocial preparedness. The scale employs 16 items to measure the four domains: Financial Preparedness, six items assessed investment and savings sufficiency, ability to cope with immediate or age 60 retirement, and homeownership likelihood. Health Preparedness, five items evaluated healthy and unhealthy behaviours and medical service utilization. Lifestyle Preparedness, three items included broad measures of interests outside work and more specific activities. Psychosocial Preparedness, focused on roles, with items on anticipatory socialization, separating from work and reducing work hours. On a 7-point Likert scale ranging from "Strongly disagree (1)" to "Strongly agree (7)", respondents were asked to fill in or score their replies to each of the short statements. High scores indicated that the respondent felt well-prepared for retirement across the financial, health, lifestyle, and psychosocial domains. Sample questions in the scale include: "*If I was forced to retire today, I would have enough money to cope well with retirement and I only eat foods that will benefit my long-term health*".

3.8.2 Retirement Planning Intentions Questionnaire

Retirement Planning Intentions was measured using the decision to prepare a scale developed by Noone et al. (2010) . The scale was developed on the rationale that before an individual engages in goal-oriented behaviours, they evaluate the effectiveness and timings of these actions. The questionnaire is designed to evaluate not only whether individuals intend to plan for retirement but also the cognitive processes that underlie these intentions. Factors such as the perceived benefits of planning, the appropriateness of the timing, and the influence of social factors such as the behaviours of peers on the decision to engage in retirement preparation are examined (Glover & Prawitt, 2014). This methodological approach ensures that the scale captures the complex considerations individuals assess when determining whether to undertake retirement planning.

The items included in the scale are specifically formulated to address common concerns and motivations related to retirement planning. These include whether *individuals believe it is too early to begin planning or whether they perceive that their peers are already preparing for retirement*. By encompassing these various dimensions, the scale offers a comprehensive assessment of an individual's readiness and intention to plan for retirement, taking into account both practical considerations and the broader social context in which these decisions are made. On a 7-point Likert scale ranging from "Strongly disagree (1)" to "Strongly agree (7)", respondents were asked to fill in or score their replies to each of the short statements. High scores indicated the respondent's willingness to plan for retirement across the financial, health, lifestyle, and psychosocial domains

3.8.3 Financial Satisfaction Questionnaire

The scale to measure financial satisfaction was adapted from the work of Ali et al. (2015). The scale assesses an individual's contentment and perceived stability in their financial situation. Statements that gauge overall satisfaction, perceived control over finances, and the ability to manage financial challenges are adopted. For instance, it explores whether individuals feel satisfied with their finances, if they believe they can improve their situation, and whether they have enough income to cover living costs. The scale also measures financial resilience, such as the ability to cope with a significant income loss, and perceived creditworthiness, like the ease of obtaining a loan if needed. Each respondent rated their agreement with the provided statements on a 7-point Likert scale, ranging from "Strongly disagree (1)" to "Strongly agree (7)". Higher scores on this scale reflected a greater sense of financial satisfaction, indicating stronger confidence in managing their finances, perceived stability, and resilience in the face of financial challenges.

3.8.4 Financial Socialisation Questionnaire

The financial socialization scale adapted from Hira et al. (2013) assesses how various influences (e.g., parental, peer, media, and workplace) shape an individual's financial behaviour and decision-making. Parental influences are measured through questions about the frequency of discussions during childhood about handling money, the importance of saving, and advice on investing. Peer influences are explored by asking how often individuals obtain investment information from friends or colleagues. Media influences are gauged through questions about the frequency of obtaining investment information from various media sources such as the Internet, TV, radio, and print materials. Finally, workplace influences are assessed by inquiring how often individuals receive investment information from their workplace. This scale helps to understand the different sources that contribute to an individual's financial socialization. Respondents rated their agreement with each of these items on a 7-point Likert scale, ranging from "Not often (1)" to "Very Often (7)". Higher scores on this scale reflected a stronger financial socialization, indicating greater exposure to and influence from these various sources.

3.8.5 Financial Literacy Questionnaire

The assessment of financial literacy was carried out using a scale adapted from research by of Owusu et al. (2023). The scale assesses various aspects of financial literacy, confidence, and behaviour. The scale explores how well individuals know financial products, how confident they are in making financial decisions, and whether they seek financial advice. The statements also evaluate financial planning habits, such as setting goals and saving regularly, as well as perceptions of credit card safety and awareness of spending habits. Lastly, they measure the individual's commitment to enhancing financial knowledge through continuous learning. Some of the statements captured in the scale include: "*I have never sought financial advice or information to help with money troubles, or set money goals, I set long-term financial goals and strive to achieve them, I plan and implement a regular savings/investment schedule"*. Respondents rated their agreement with each statement on a 7-point Likert scale, from "Strongly disagree (1)" to "Strongly agree (7)". Higher scores indicated a greater sense of financial literacy, confidence in managing finances, and perceived stability, as well as a higher level of resilience in dealing with financial challenges.

3.8.6 Mental Accounting Questionnaire

The mental accounting scale developed by Muehlbacher and Kirchler (2019) assesses personal differences in mental accounting. Factors such as personality traits, cognitive abilities, and financial literacy influence how people create and manage these mental accounts. The statements indicate a high level of financial organization, where the person not only tracks their income and expenses but also categorizes them to better understand spending patterns. This kind of mental accounting helps in making informed financial decisions, setting budgets, and identifying areas for potential savings. The overall impression is of someone who is conscientious, detail-oriented, and proactive in their financial planning, likely contributing positively to their financial well-being. Respondents rated their agreement with each statement on a 7-point Likert scale, from "Strongly disagree (1)" to "Strongly agree (7).

3.8.7 Financial Cognition Questionnaire

Developed by Archuleta et al. (2021), the financial cognition scale assesses an individual's self-regulation of financial behaviour, with a focus on their thoughts about money management. The scale assesses personal motivation, judgement, and perception of situational and environmental influences. It is made up of three components: predicting spending situations, learning how to better manage money, and understanding motivations. The statements captured in the scale are: *"I can predict the situations when I will spend more than I meant to, I know what I should do differently to manage my money better, I know what motivates me to* *spend or save the way I do*". On a 7-point Likert scale ranging from "Strongly disagree (1)" to "Strongly agree (7)", respondents were asked to fill in or score their replies to each of the short statements.

3.9 Ethical Consideration

The survey instrument was submitted to the Ethics Committee for the Humanities (ECH) of the University of Ghana for review before data collection began to ensure compliance with ethical standards. Ethical clearance is required for studies involving the collection of information from individuals, ensuring that the research is conducted ethically and poses no risk to participants. The necessary protocols were followed, and the ECH granted approval on May 23rd, 2024, for a period of 12 months (with reference number ECH 244/ 23-24). Ethical considerations, as outlined by Blumberg et al. (2014), ensure that research is carried out legally and responsibly, minimizing risks to participants. This study adhered to the University of Ghana's Research Ethics Policy, with the research aims clearly explained to respondents. Participation was entirely voluntary, no personal information, such as names or email addresses, was collected, and the information gathered was kept confidential and used solely for this study.

3.10 Pilot Study

A pilot study is a preliminary investigation conducted on a limited scope prior to the main research project. (Ismail et al. 2018). to evaluate feasibility, time, cost, risk, and the potential for refining the study design, including the methods and instruments. It allows researchers to refine their approach, identify any issues with the study protocol, allowing for necessary adjustments before conducting the full-scale study. Pilot studies help ensure that the actual study is properly designed and that the research methods will work as intended, reducing the likelihood of encountering significant problems later on. In this study, the pilot study had two main objectives: first, to address practical issues related to the research instrument; and second, to assess potential outcomes and identify factors that could negatively impact the research's success. The pilot study involved testing the survey instrument's appropriateness and conducting a scaled- down version of the full study.

3.11 Pilot Testing of Questionnaire

A pilot test was first conducted to assess the clarity of the questionnaire items and to confirm that they effectively addressed the research objectives. Pre-testing questionnaires is useful for refining their content, format, and order (Ikart, 2019). Fifteen prospective respondents participated in this pilot phase, which aimed to assess how well the questions were understood, how respondents interpreted them, and how engaged they were with the survey. Following the positive feedback, the questionnaire was modified and completed for implementation in the main data collection for the study.

3.12 Pilot Testing the Study

To determine the research's feasibility, a pilot study was undertaken, which highlighted estimated timelines and costs, potential obstacles, procedural difficulties, and anticipated results. This allowed the researcher to refine the study design before proceeding with the full-scale. The study employed 150 questionnaires in the data analysis. The algorithm results confirmed the model's reliability and validity, as all recommended thresholds were met. The proposed factors accounted for approximately 11% of the variation in Retirement Planning Behavior, and the model exhibited no multicollinearity, as all constructs had Variance Inflation Factor (VIF) values below the recommended threshold.

3.13 Administration of Questionnaire

A total of 618 questionnaires were distributed to informal sector workers in the Greater Accra Region of Ghana, specifically in Tema, Madina, and Accra where informal employment is highly concentrated. Krejcie & Morgan (1970), recommend a sample size of approximately 384 for large populations, thus making 618 more than adequate to ensure representativeness and account for non-response or incomplete data. The survey covered a diverse range of occupations within the services sector, including food traders, wholesalers and retailers, caterers, laundry services, refuse collectors, domestic workers, electrical and mechanical repairers, mobile money vendors, internet café operators, auto mechanics, auto electricians, vulcanizers, sprayers, welders, graphic designers, photographers, hairdressers, barbers, and private security personnel. Additionally, the survey targeted workers in the

construction industry, such as masons, carpenters, steel benders, plumbers, and electricians, as well as those in the manufacturing sector, including metal works, food processing, and textile and garment industries. This selection of informal workers was based on their prevalence in urban informal employment in Ghana as documented by as documented by the Ghana Statistical Service (GSS, 2021). These categories represent a broad spectrum of informal economic activities and were selected to ensure diversity in economic roles, income levels, and exposure to financial planning practices.

Priority was given to individuals aged 18 and above who were currently engaged in informal sector work within the Greater Accra Region. Participants who were not currently active in the informal sector or did not consent to participate were excluded from the study. Due to the low literacy levels among many informal sector workers, the questionnaires, originally in English, were translated into local languages (Twi, Ewe, Ga) with the help of translators to ensure clear understanding and accurate responses. While the translation contributed to a higher response rate, not all completed questionnaires were fully filled out.

Out of the 618 questionnaires distributed, 18 were excluded from the data analysis due to incomplete or inappropriate responses. Specifically, observations where most questions related to the main constructs of the study were left unanswered were removed. After these exclusions, a total of 594 questionnaires were used for the final analysis.

3.14 Data Analysis Technique

The data was analysed using descriptive statistics first, then inferential statistics. Inferential statistics assess the study's significant hypotheses and allow the researcher to make predictions, whereas descriptive statistics describe the respondents' characteristics and responses to the questions. The descriptive analysis was carried out using the Statistical Package for the Social Sciences (SPSS), presenting the respondents' demographic details and sample statistics quantitatively in a table. The researchers next investigated the expected outcomes among the study constructs using the Structural Equation Modelling (SEM) technique, especially the Partial Least Squares-Structural Equation Modelling (PLS-SEM) technique.

3.15 Structural Equation Modelling

The study's key hypotheses were tested using the Structural Equation Modelling (SEM) technique, which has been employed in previous investigations (Ciołek, 2017; Clikeman & Henning, 2000; Owusu, Korankye, et al., 2023). Researchers can use SEM to test measurement models and see how accurate they are in more efficient structural routes SEM provides a framework for evaluating the study model's overall fitness and structural paths between constructs (Hair et al., 2012; Wong, 2013). SEM has been proven to be particularly beneficial in simultaneously analysing complicated model linkages (Asyraf & Afthanorhan, 2013). It is more suited to latent or unobserved factors in the study (Astrachan et al., 2014). According to Sarstedt et al. (2017), "principal Component Analysis, Factor Analysis, Cluster Analysis, Analysis of Variance, and Multiple Regression are considered first-generation analytical techniques, which SEM surpasses in terms of its capacity to assess complex relationships among variables simultaneously".

The two most widely used SEM techniques are covariance-based SEM (CB-SEM) and partial least square SEM (PLS-SEM) (Asyraf & Afthanorhan, 2013). The choice between these procedures is largely guided by the underlying statistical assumptions and the specific requirements of the measurement model testing or validation process (Gefen et al., 2000).

3.15.1 Partial Least Square Structural Equation Model (PLS-SEM)

In exploratory research, PLS-SEM is used to construct theoretical models by emphasizing the maximization of explained variance in outcome variables (Sarstedt et al., 2017). PLS-SEM is applied in constructing exploratory research theories by prioritizing the explanation of variance in dependent variables during the model evaluation (Hair et al., 2014; Hair et al., 2012; Sarstedt et al., 2017). The measurement model and the structural model define the path models in PLS-SEM. The structural model explores the link between constructs and their respective indicators, in contrast, the measurement model assesses the link between latent variables and their corresponding indicators (Henseler et al., 2016). Once the measurement model parameters are optimized, the structural model is constructed using the PLS-SEM algorithm. Consequently, the results of the PLS-SEM can be thoroughly examined after evaluating the measurement model to address any undesirable qualities.

Compared to CB-SEM, PLS-SEM presents fewer restrictions and is viewed as a more adaptable approach for structural model estimation. Furthermore, PLS-SEM is extensively employed in contemporary research due to its methodological strengths, particularly its ability to accommodate a wide range of sample sizes, including both large and small datasets (Asyraf & Afthanorhan, 2013), “the capacity to accommodate models with fewer than three indicators as well as those exceeding fifty indicators (Astrachan et al., 2014), not assuming any specific data distribution (Wong, 2013), and “the ability to handle formative constructs, reflective constructs, or a combination of both. Thus, this study views the two statistical methods as complementing each other rather than being in opposition.

3.15.2 Selecting CB-SEM or PLS- SEM

Existing studies have documented key guidelines for selecting between CB-SEM and PLS-SEM, helping researchers avoid common application mistakes (Hair et al., 2012; Henseler et al., 2016). The appropriateness of choosing one method over the other depends on several underlying factors, including the research objective, the specified measurement model type (formative or reflective), data properties (including normality, sample size, and number of indicators), and the assessment of the structural model.

3.15.2.1 Objectives of the Study

To effectively use CB-SEM and PLS-SEM, researchers recommend having a clear grasp of the specific research questions and the development background of each method (Gefen et al., 2000). Understanding the intended purpose of each approach is crucial for their correct application. CB-SEM is ideal for testing or comparing theories, while PLS-SEM is better suited for predicting key constructs of interest or extending existing structural theories. PLS-SEM is especially suitable for research aimed at predicting or explaining constructs.

3.15.2.2 Reflective and Formative Constructs

The decision between using PLS-SEM or CB-SEM is influenced by how the measurement model is specified. Previous research (Astrachan et al., 2014; Henseler et al., 2016) indicates The measurement model may be defined as reflective or formative based on how the indicators relate to the latent construct.

In a reflective model, the latent construct is assumed to exist independently of its indicators., meaning that the construct influences the indicators rather than being influenced by them. Changes in the construct lead to changes in the indicators.

This type of model is typically illustrated with arrows pointing from the construct to the indicators (Hair et al., 2014; Sarstedt et al., 2017). Reflective models are often chosen when the research objective is to predict or explain observed measures, as they focus on minimizing the residual variance in the measurement model.

On the contrary, in a formative model, the construct is formed by its indicators. Here, changes in the indicators drive changes in the construct, rather than the construct influencing the indicators. Formative models are usually depicted with arrows pointing from the indicators to the construct (Coltman et al., 2008; Hanafiah, 2020). Therefore, understanding whether a construct is formative or reflective is crucial for researchers in selecting the most suitable approach. According to prior studies (Henseler et al., 2016). CB-SEM is best suited for reflective constructs, while PLS-SEM is versatile enough to handle both formative and reflective constructs effectively.

3.15.2.3 Data Characteristics and Algorithm

Research emphasizes that understanding data characteristics is essential for choosing the appropriate analytical method, ensuring valid and reliable construct measurement (Astrachan et al., 2014). Hair et al. (2012) note that sample size is a key factor in this choice: PLS-SEM is more suitable for smaller samples, while both PLS-SEM and CB-SEM are appropriate for larger samples. The structural model's complexity also plays a role. CB-SEM is recommended when there are between three and 50 indicator variables after internal consistency checks, whereas PLS-SEM is versatile enough to handle a wider range of indicators. Additionally, CB-SEM assumes data follows a normal distribution, while PLS-SEM is appropriate for both normal and skewed data distributions due to its lack of distributional assumptions.

3.15.2.4 Quality of Structural Model

The current study the PLS-SEM approach to assess the structural relationships that exist among the constructs, due to its strengths over CB-SEM. PLS-SEM is particularly effective for estimating the impact of constructs on one another, aligning with the study's goal. Additionally, PLS-SEM is chosen to maximize the explained variance of the dependent variable, a key capability of this method. By using PLS-SEM, the study also avoids assumptions of normality, as it accounts for data distribution. Although CB-SEM could also be applied to reflective models, PLS-SEM's advantages make it the preferred approach.

In deciding which SEM approach to use, it is essential to analyse the quality of the structural model. While both CB-SEM and PLS-SEM facilitate simultaneous analysis of structural relationships, they differ in their methods for evaluating model quality. PLS-SEM assesses fit based on the inconsistencies explained within the endogenous constructs (Hair et al., 2014). This approach is particularly suitable for studies aiming to predict and develop theory, as it prioritizes generating estimates that enhance the explained variance in the outcome constructs (Hair et al., 2012). Another objective of PLS-SEM is to evaluate the model's fit with the sample representing the target population.

On the other hand, CB-SEM evaluates fit by accurately estimating the observed covariance structure, aiming to minimize the differences between the theoretical and estimated (Hair et al., 2012). This approach shows how well a projected model aligns with the sample drawn from the population. Given these differences, the choice between CB-SEM and PLS-SEM depends on the specific needs of the study, with PLS-SEM offering distinct advantages for this research's objectives.

3.16 Assessing the Measurement Model

According to the literature, it is crucial to assess the measurement model properties of each construct before proceeding with structural model analysis to ensure they meet the approved criteria (Hair et al., 2012). The purpose of this assessment is to ensure that the measurement model achieves sufficient construct validity and reliability. As outlined by Cronbach and Meehl (1996), the adequacy of the measurement model is determined by testing factors such as internal consistency, indicator reliability, convergent validity, and discriminant validity.

3.16.1 Internal Consistency Reliability

Internal consistency is typically assessed through indicator reliability and established reliability coefficients. (Cronbach & Meehl, 1996). In Smart PLS SEM, indicator reliability is evaluated through indicator loadings. Hair et al. (2010) suggest that indicator loadings of 0.70 or higher are typically required for an indicator to be considered a valid measure of a construct. Nonetheless, if alternative evaluation criteria—such as validity and reliability assessments—are met, indicator loadings of 0.40 or higher may be deemed acceptable.

To determine internal consistency reliability, studies often use Cronbach's Alpha (CA) and Composite Reliability (CR) scores (Nunnally & Bernstein, 1978). A CA or CR score of 0.70 or higher is generally considered indicative of a reliable construct. Cronbach's Alpha presumes that all items within a construct are equally important and carry the same weight (Cronbach, 1971) whereas Composite Reliability considers the varying factor loadings of indicators, using these loadings for its calculations (Hair et al., 2012). Consequently, CR is often regarded as a more robust measure of reliability compared to CA.

3.16.2 Convergent Validity

Convergent validity indicates how well the indicators of a construct are related to each other (Lewis et al., 2005). While observing correlations among these indicators can indicate convergent validity, a precise measurement is obtained using the Average Variance Extracted (AVE). Hair et al. (2011) recommend that an AVE value of 0.5 or higher is necessary to establish adequate convergent validity. When the AVE is higher, this reflects that the construct effectively represents its indicators, as it explains more than half of their variance—an important criterion for convergent validity (Urbach & Ahlemann, 2010).

3.16.4 Discriminant Validity

Discriminant validity testing is crucial for ensuring that the indicators of different constructs in a path model are distinct from each other (Lewis et al., 2005; Urbach & Ahlemann, 2010). It examines whether the measures of a construct are sufficiently different from those of other constructs. While convergent validity assesses the extent indicators capture the underlying construct, discriminant validity ensures these indicators are not better suited to measure a different construct. High correlations among indicators within a construct indicate strong convergent validity, whereas high correlations across constructs may signal a lack of discriminant validity (Guo et al., 2008).

In studies employing PLS-SEM, discriminant validity is often evaluated using the Fornell–Larcker criterion and cross-loadings (Fornell & Larcker, 1981; Henseler et al., 2016). The Fornell–Larcker criterion compares the correlation among constructs by asserting that a construct must be more closely related to its own indicators than to indicators of other constructs. To satisfy this criterion, the square root of a construct's AVE should be more than its correlations with other constructs.

The cross-loadings method, by contrast, evaluates the correlation between a construct and the indicators of other constructs. Chin (1998) asserts that discriminant validity is established when a construct correlates more strongly with its own indicators than with those of other constructs. Thus, whereas the Fornell–Larcker criterion evaluates discriminant validity by comparing the variance shared between a construct and its indicators to that shared with other constructs, the cross-loadings method assesses it by examining how strongly indicators load on their own construct relative to others.

3.17 Assessing the Structural Model

After confirming the constructs' appropriateness through reliability and validity assessments in the measurement model, the study moved on to evaluating the structural model. This evaluation is essential to demonstrate that the hypothesized relationships within the structural model are consistent with the data collected (Urbach & Ahlemann, 2010), enabling an analysis of the structural relationships between the constructs. Before testing these relationships, however, the structural model's predictive power concerning the endogenous constructs is examined. This involves conducting multicollinearity tests, analysing the coefficient of determination (R^2), and assessing the model's predictive relevance.

To identify potential multicollinearity issues before testing the study's hypotheses, it is highly recommended to use the Variance Inflation Factor (VIF) (Henseler et al., 2009). The VIF evaluates the degree of collinearity between constructs and reveals how multicollinearity influences the variance of regression coefficients. (O'Brien, 2007). For the structural model to be deemed free of multicollinearity problems, the VIF values should be below the threshold of 10 (O'Brien, 2007).

Another crucial aspect of structural model assessment is the coefficient of determination (R^2) for the dependent variable (Henseler et al., 2009). R^2 reflects the level of predictive accuracy for the endogenous variable by indicating the proportion of variance explained by the exogenous variables. Based on the degree to which the independent variable explains variation in the dependent variable, the PLS path model can be classified as substantial, moderate, or weak (Chin, 1998). A low R^2 suggests that the conceptual model lacks the capability to explain the endogenous construct effectively.

The model's predictive relevance is evaluated using the blindfolding procedure proposed by Hair et al. (2014). After calculating the model's parameters, this procedure involves omitting a portion of the data and then estimating it using the previously calculated parameters (Henseler et al., 2009). The model is considered to have predictive relevance if the cross-validated redundancy (Q^2) is greater than zero, as recommended by Sarstedt et al. (2017).

To test the study hypotheses, a resampling approach;-bootstrapping was employed to determine path coefficients and their relevance within the structural model. The PLS-SEM method is distinct in that it doesn't assume a specific data distribution for indicators or error terms. Bootstrapping, which involves generating a large number of subsamples (ideally 5000) from the initial dataset, allows the model to be re-estimated for each of these subsamples. This technique helps to establish confidence intervals and assess the significance of the PLS path model estimates. By treating the sample as though it represents the entire population, bootstrapping provides insights into the shape, spread, and potential bias of the distribution (Henseler et al., 2009).

CHAPTER FOUR

ANALYSIS AND INTERPRETATION OF RESULTS

4.0 Introduction

This chapter outlines a summary of the empirical analysis and presents the study's findings. First, the descriptive statistics pertaining to the respondents' demographics and the study's constructs are presented and discussed. Then, the results of the PLS-SEM analyses are presented and the results of the assessment of the measurement model, including the PLS loadings/weights and the quality assessments. Subsequently, the findings from the evaluation of the structural model are presented and the hypotheses of the empirical study are examined.

4.1 Data Screening and Missing Data Estimation

The initial assessment of the collected data involved a data screening process. This process entailed reviewing the entered data for errors, such as incorrectly entered values, missing data, and assessing the data's normality to ensure readiness for analysis (Hair Jr et al., 2021). Out of the 618 questionnaires received, only 594 were usable, as 24 respondents had incomplete survey items. To prevent bias, cases with substantial missing data were excluded.

4.2 Descriptive Statistics of Respondents

This section presents an examination of the demographic profile of the respondents shown in Table 4.1. The results show that 58.9% of respondents (350 out of 594) were male, while 41.1% were female. This indicates that the sample was predominantly male, reflecting gender patterns commonly seen in certain informal sector jobs, particularly those involving manual labour and services. In terms of age, a significant portion of respondents (40.2%) were between 25 and 34 years old, followed by 26.9% in the 35 to 49 age range. Respondents below 25 years accounted for 18.9%, while those aged 50 and above made up 14.0%. This highlighted a generally youthful workforce. Respondents had varied educational backgrounds, with the majority having received formal education. The largest group (36.5%) had completed Senior High School (SHS) or Secondary Technical School (SHTS). Approximately 25.1% had a bachelor's degree, and 12.0%

had a diploma. A smaller group (3.4%) held a master's degree, while 23.1% fell into the "Other" category, which included Junior High School graduates, dropouts, middle school graduates, those with no formal education, vocational training, and other non-formal education.

In terms of occupation, most respondents worked in the services sector, which accounted for 70.7% of the sample. The construction sector followed at 18.7% (111 respondents), with manufacturing making up 10.6%. The dominance of the services sector was typical of the informal economy, where jobs such as trading, repair services, and personal care are common. Work experience was fairly distributed among respondents. Approximately 26.6% had 3 to 5 years of experience, while 26.1% had 6 to 10 years. Those with less than 3 years of experience represented 21.7%. Additionally, 15.2% had 11 to 20 years of experience, and 10.4% had above 20 years. This suggests that most respondents were in the early to mid-stages of their careers.

For income, the results depict that the majority of respondents earned low wages, with 77.1% reporting monthly earnings below GH₵ 500. Another 14.5% earned between GH₵ 500 and GH₵ 1500, while 4.2% each earned between GH₵ 1501 and GH₵ 2500 or above GH₵ 2500. These figures underscored the financial constraints faced by informal workers, which affect their ability to save and plan for retirement.

Table 4.1: Descriptive Statistics of Respondents

Demographic variables	Grouping	Frequency (594)	Percent (100)
Gender	Male	350	58.9
	Female	244	41.1
Age	Below 25 years	112	18.9
	25 years to 34 years	239	40.2
	35 years to 49 years	160	26.9
	50 years and above	83	14
Educational Level	SHS/SHTS	217	36.5
	Diploma	71	12
	Bachelor's	149	25.1
	Masters	20	3.4
	Other	137	23.1
Occupation Type	Services	420	70.7
	Construction	111	18.7
	Manufacturing	63	10.6
Working Experience	Less than 3 years	129	21.7
	3 to 5 years	158	26.6
	6 to 10 years	155	26.1
	11 to 20 years	90	15.2
	Above 20 years	62	10.4
Income	Less than GHc 500	458	77.1
	GHc 500 to GHc 1500	86	14.5
	GHc 1501 to GHc 2500	25	4.2
	Above GHc 2500	25	4.2

4.3 Descriptive Statistics of the Study Constructs

Table 4.2 provides the views of the participants on retirement planning and the factors that shape their retirement planning decisions and behaviours. The mean scores and standard deviations of the respondent's views on the indicators for the various constructs are also reported. The mean scores for the indicators within each construct reflect the level of importance respondents assign to that indicator.

The construct financial satisfaction reflects how content workers feel about their current financial situation. The overall mean score of 3.60 suggests that many workers are somewhat dissatisfied or uncertain about their financial well-being. While workers displayed some satisfaction with their ability to manage short-term financial needs, such as dealing with income fluctuations (mean = 4.09) and obtaining loans, if necessary (mean = 3.75), they also had concerns about whether their income was enough to cover living costs (mean = 4.09) and whether they can improve their financial situation (mean = 3.81). Lower scores for general satisfaction with their current financial situation (mean = 3.07) and their ability to cope with major income losses (mean = 3.32) indicates that many workers lack financial security and resilience. This dissatisfaction likely stems from the challenges of working in the informal sector, where income can be unpredictable and financial safety nets are often absent. These findings imply that while some workers are managing to get by, many do not feel financially secure or satisfied, which could affect their ability to plan for the future and prepare for retirement.

Financial socialization plays a crucial role in shaping how these workers managed their finances. Parental influence stood out as particularly significant, with mean scores ranging from 4.02 to 4.51, indicating that many workers frequently discussed financial topics with their parents when they were growing up. These high scores highlight the strong role that the family plays in guiding early financial habits, particularly in areas like money management, saving, and investing. Peer influence was also notable, with a mean score of 4.24, showing that workers often turn to friends and colleagues for financial advice. This reliance on peers could be due to shared experiences and similar economic situations within the informal sector. Media influence was even more pronounced, with a mean score of 4.56, highlighting the powerful role of media in providing financial information. Accessible financial education through the internet, television, and print media is a vital resource. Workplace influence, with a mean score of 4.52, underscored the importance of work environments as sources of financial information, whether through formal programs or casual conversations. The overall financial socialization score of 3.60 suggests a moderate level of social influence on retirement planning, reflecting differences in how workers experienced and applied socialization.

Financial literacy is essential because it lays the groundwork for making sound financial decisions. The overall mean score of 3.88 indicates that workers had a reasonable level of financial literacy, suggesting that while many had a basic understanding of financial products and services, there was still room for improvement. Workers generally felt knowledgeable about financial services (mean = 4.35) and somewhat confident in making financial decisions (mean = 4.07). However, the lower score of 3.56 for seeking financial advice points to a potential gap in proactive financial management. Many workers did not regularly consult with financial advisors, which is usually due to limited access, mistrust, or lack of awareness about the benefits of professional financial guidance. Furthermore, uncertainty about where money was spent (mean = 3.47) and concerns about the safety of credit cards (mean = 3.86) indicates that workers could benefit from more education on budgeting and the risks related to debt. The low score for increasing financial knowledge (mean = 3.19) reflects a limited interest or opportunity among workers to improve their financial literacy, which could hinder their ability to manage their finances effectively over time.

Mental accounting refers to the way individuals categorize and manage their money, often influencing financial behaviour and decision-making. The overall mean score of 4.29 indicates that workers were reasonably engaged in mental accounting practices. The highest score within this construct was for tracking financial activities (mean = 5.31), suggesting that many workers place a high value on monitoring their income and expenses. However, while they may have kept records of earnings and expenses (mean = 4.24) and had a rough idea of monthly spending (mean = 4.16), there was less emphasis on categorizing expenses (mean = 3.67) or maintaining a well-organized financial system (mean = 4.08). These findings suggest that while workers understand the importance of financial management, there is variability in how thoroughly and consistently they apply these practices. The moderate scores also indicate potential challenges in financial planning, as less detailed mental accounting could lead to inefficiencies in managing resources and preparing for future financial needs.

Financial cognition is another key construct that reflects workers' ability to understand and manage their retirement planning. The overall mean score of 4.36 indicates that most workers had a reasonable understanding of their financial situation and the factors influencing their financial decisions. The highest score within this construct was for knowing what motivated spending or savings behaviour (mean = 4.61), suggesting that workers were fairly self-aware of their financial habits. This self-awareness is crucial for making adjustments to improve financial management. Workers expressed reasonable confidence in predicting when they might overspend (mean = 4.13) and in knowing what changes they should make to better manage their money (mean = 4.32). However, while these scores were relatively high, they highlight room for improvement in financial planning and behaviour. For instance, workers may understand their motivations and potential financial pitfalls, but translating this understanding into consistent, effective financial management may still be challenging for many.

Retirement planning intentions was measured through financial, health, lifestyle, and psychosocial dimensions. The mean score for financial planning intentions was 4.18, suggesting a reasonable level of awareness and intent among workers to prepare financially for the future. The data reveals that while many workers recognize the importance of financial planning for retirement, as evidenced by the strong agreement that making financial provisions for retirement is worthwhile (mean = 5.09), some still feel it is too early to start planning (mean = 3.69). This indicates a gap between awareness and action, where the acknowledgment of the need for financial security in retirement is not fully translated into proactive planning behaviours. Health retirement planning intentions showed a more cautious approach, with a mean score of 3.57. Workers appear to prefer dealing with health issues as they arise rather than engaging in long-term health planning, reflecting a more reactive than proactive approach to health management. Lifestyle retirement planning intentions were somewhat stronger, with a mean score of 4.29, indicating that workers are beginning to consider how they will spend their time after retirement. The high score for developing new activities for retirement (mean = 4.96) also indicates that many are aware of the need to prepare for a fulfilling retirement life, even if they have not fully planned it out yet. Psychosocial retirement planning intentions, with a mean score of 4.18, shows a reasonable level of awareness among workers about the need to prepare for changes in their roles as retirees. While there is recognition of these changes, the overall score indicates that this is not yet a primary focus for many workers.

Retirement planning behaviour was also measured through financial, health, lifestyle, and psychosocial dimensions. The financial behaviour dimension, with a mean score of 4.15, suggests that workers are somewhat ready for retirement, but there were significant gaps. For instance, the low score of 2.71 for being able to handle retirement if it were to happen immediately indicates that many workers are financially vulnerable. However, higher scores for owning a house without a mortgage (mean = 4.62) and saving for unexpected expenses (mean = 4.38) show that some workers are taking steps to secure their financial future. In terms of health behaviour, the mean score of 4.21 suggests that workers are to an extant engaged in actions that benefit long-term health. While they generally follow healthy habits and avoid unhealthy ones, the lower focus on regular medical check-ups (mean = 4.21) reveals a gap in preventive health care. The lifestyle behaviour dimension, with a mean score of 4.24, indicates that workers are beginning to pursue new interests and activities outside of work, which is important for a smooth transition into retirement. However, the lower score for reducing work hours (mean = 3.09) in the psychosocial behaviour dimension indicates that many workers are not actively preparing to retire. This could be due to a preference for continuing work, financial necessity, or a sense of being unprepared for retirement.

Table 4.2: Descriptive Statistics on Constructs

Code	Construct/Indicators	Mean	Std. Deviation
	FINANCIAL SATISFACTION		
FS1	I am satisfied with my current financial situation	3.07	2.01
FS2	I can do little to improve my current financial situation	3.81	1.97
FS3	I rarely run short of money	3.53	2.16
FS4	Sometimes I feel that my income does not quite cover my living costs	4.09	2.21
FS5	If I had a major loss of income, I could manage for a period of time (e.g. for 3 months)	3.32	2.18
FS6	Based on my current financial situation, I could easily obtain a loan if I needed one	3.75	2.18
	OVERALL	**3.60**	**2.12**
	PARENTAL INFLUENCE		
PFS1	When you were growing up, how often did your parents talk with you about how to handle money?	4.51	1.99
PFS2	When you were growing up, how often did your parents talk with you about the importance of saving money for the future	4.48	2.05
PFS3	My parents advised me when I was young on how to invest	4.02	2.25
	PEER INFLUENCE		
PeFS1	How often have you obtained information about investing from friends or colleagues	4.24	1.92
	MEDIA INFLUENCE		
MFS1	How often have you obtained information about investing from the Internet; TV programs; radio programs; newspapers, magazines, newsletters or books	4.56	1.98
	WORK INFLUENCE		
WFS1	How often have you obtained information about investing from your workplace? Would you say never, seldom, sometimes, often or very often	4.52	1.93
	FINANCIAL SOCIALISATION	**3.60**	**2.02**
	FINANCIAL LITERACY		
FL1	I know much about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)	4.35	1.92
FL2	I feel confident when I make decisions about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)	4.07	1.98

FL3	I have never sought financial advice or information to help with money troubles, or set money goals	3.56	2.07
FL4	I set long-term financial goals and strive to achieve them	4.47	1.87
FL5	I plan and implement a regular savings/investment schedule	4.10	2.00
FL6	I feel credit cards are safe and risk-free	3.86	2.08
FL7	I am uncertain about where my money is spent	3.47	2.09
FL8	I read to increase my financial knowledge.	3.19	2.18
	OVERALL	**3.88**	**2.02**
	FINANCIAL PLANNING		
FRP1	It's too early for me to start thinking about my retirement finances.	3.69	2.38
FRP2	I'd rather deal with any financial issues closer to retirement, rather than making financial provisions now	3.94	2.28
FRP3	I know that people in my age group are making financial preparations for retirement	4.45	2.03
FRP4	It's worthwhile to make financial provisions for retirement.	5.09	1.96
	HEALTH PLANNING		
HRP1	It's too early for me to consider my long-term health	3.46	2.39
HRP2	I'd rather deal with any health issues when they arise rather than prepare for them now.	3.68	2.32
	LIFESTYLE PLANNING		
LRP1	It's too early for me to start thinking about how I will spend my time in retirement.	3.88	2.43
LRP2	I'd rather decide what to do with my time once I retire, rather than think about it now.	4.06	2.26
LRP3	I know that people in my age group are developing new ways to spend their time.	4.28	1.92
LRP4	It's worthwhile to develop new activities for retirement.	4.96	1.79
	PHYSCOSOCIAL PLANNING		
PRP1	It's too early for me to consider my roles as a retired person.	4.02	2.45
PRP2	I'd rather deal with any issues regarding my future roles when they arise, rather than prepare for them now.	3.97	2.30
PRP3	I know that people in my age group are preparing for changes to their roles.	4.16	1.90
PRP4	It's worthwhile to prepare for changes to my roles as a retired person.	4.91	1.79
	RETIREMENT PLANNING INTENTIONS	**4.18**	**2.16**
	MENTAL ACCOUNTING		
MA1	It is important to me to keep track of my financial activities precisely	5.31	1.70
MA2	I keep a record of my earnings and expenses	4.24	1.90
MA3	I could at least say roughly how much I have spent this month	4.16	1.85
MA4	I classify my expenses into different categories (e.g., clothing, entertainment, education.)	3.67	1.94
MA5	Generally, I am someone others would describe as "Well organized"	4.08	1.85
	OVERALL	**4.29**	**1.85**
	FINANCIAL COGNITION		
FC1	I can predict the situations when I will spend more than I meant to	4.13	1.80

FC2	I know what I should do differently to manage my money better.	4.32	1.78
FC3	I know what motivates me to spend or save the way I do.	4.61	1.86
	OVERALL	**4.36**	**1.81**
	FINANCIAL BEHAVIOUR		
FPRd1	If I was forced to retire today, I would have enough money to cope well with retirement.	2.71	1.92
FPRd2	If I was forced to retire at age 60, I would have enough money to cope well with retirement.	4.42	2.02
FPRd3	Members of my household are able to put aside or invest a sufficient proportion of our income.	3.69	1.89
FPRd4	By the time I retire, I will have sufficient income to ensure the standard of living I want in retirement.	4.40	1.97
FPRd5	By the time I retire, I will own a house without a mortgage.	4.62	1.97
FPRd6	By the time I retire, I will have enough money to pay for any unexpected expenses	4.38	1.97
	HEALTH BEHAVIOUR		
HPRd1	I only eat foods that will benefit my long-term health.	4.47	1.92
HPRd2	I avoid all unhealthy behaviours.	4.91	1.96
HPRd3	I try to keep physically active (e.g., by taking regular walks, playing sports, or doing yoga, etc.).	4.35	2.07
HPRd4	I never get medical screening for diseases such as cancer, diabetes, and heart disease.	4.26	2.24
HPRd5	I never have general medical check-ups.	4.21	2.27
	LIFESTYLE BEHAVIOUR		
LPRd1	There are many things I could do with my time if I was forced to retire today.	4.51	1.93
LPRd2	I have recently taken up new interests, activities, or hobbies.	3.94	1.93
LPRd3	I have many interests outside of work that I would like to pursue	4.27	1.99
	PYSCHOSOCIAL BEHAVIOUR		
PRd1	I am reducing or will soon reduce my work hours.	3.09	2.12
	RETIREMENT PLANNING BEHAVIOUR	**4.15**	**2.01**

4.4 Assessment of Measurement Model

The Partial Least Squares (PLS) method simultaneously assesses the measurement model quality and estimates the structural model relationships. Accordingly, the validity and reliability of the measurement model are evaluated prior to analyzing the relationships specified in the structural model (Hair et al. 2014). As noted by Cronbach and Meehl (1955) and Lewis et al. (2005), Evaluating the quality of a measurement model requires examining several important components: internal consistency, indicator reliability, convergent validity, and discriminant validity". The following section discusses the findings from the various tests used to evaluate the measurement model's validity and reliability.

4.4.1 Indicator Reliability

The reliability of the indicators in the study was evaluated using their loadings within each construct, as reflected in Table 4.3. All indicators had loadings above the minimum threshold of 0.5, recommended by Hair et al. (2014), suggesting that the items used to measure the study constructs are reliable. In reflective measurement models, indicator reliability is further assessed the extent to which an indicator's variance is accounted for by the latent variable it is designed to measure, with loadings above 0.708 considered as ideal as this reflects that more than 50% of the indicator's variance is explained. However, in social science research, especially with newly constructed scales, it is common to encounter loadings below 0.708 (Hulland, 1999). Indicators with loadings between 0.40 and 0.708 may be retained if their removal does not significantly enhance reliability or validity, and if their inclusion is crucial for maintaining the content validity of the construct. Indicators with loadings below 0.40 should generally be removed from the model (Joseph et al., 2022). Overall, the loadings observed in this study affirm the reliability of the indicators used, while also aligning with best practices in handling weaker loadings.

4.4.2 Internal Consistency Reliability

After confirming the reliability of individual indicators, the internal consistency of the constructs was assessed. Internal consistency measures how well a set of indicators collectively reflects the same construct (Hair et al., 2023). The two most common measures for this are Cronbach's Alpha (CA) and Composite Reliability (rho_c). Cronbach's Alpha (CA) is a traditional estimate, assuming all indicators contribute equally to the construct. Values between 0.70 and 0.90 are generally considered satisfactory, but values above 0.90 may suggest redundancy among indicators, which can reduce construct validity (Trizano-Hermosilla & Alvarado, 2016). Composite reliability (rho_c) is used to assess internal consistency reliability.

This measure differs from Cronbach's alpha, it does not suppose that all indicators have equal loadings. A rho_c value above 0.70 is generally expected, although in exploratory research, a range of 0.60 to 0.70 is considered acceptable. It is considered acceptable when between 0.70 and 0.90 (Diamantopoulos et al., 2012). However, very high values (above 0.95) can indicate issues like straight-lining, which may inflate correlations among error terms. A more balanced approach is rho_a, a reliability measure that usually falls between CA and CR, offering a more accurate reflection of internal consistency, especially when indicator contributions vary.

4.4.3 Convergent Validity

The study used the Average Variance Extracted (AVE) metric, as recommended by Fornell and Larcker (1981) to determine whether the measurement model demonstrated convergent validity. It assesses the extent to which a construct effectively explains the variance in its indicators. The AVE, representing the average value of the squared loadings of the indicators linked with each construct, must meet or exceed the threshold of 0.5 to ensure that the construct explains at least 50% of the variance in its indicators. The results, as presented in Table 4.3, show that all constructs have AVE values above 0.5, confirming adequate convergent validity for the measurement model, consistent with criteria outlined by Hair et al. (2011) and Hair et al. (2023).

Table 4.3: Cronbach Alpha, Composite Reliability, and AVE

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Financial Cognition	0.810	0.972	0.878	0.707
Financial Literacy	0.863	0.877	0.897	0.594
Financial Satisfaction	0.730	0.817	0.804	0.514
Financial Socialisation	0.779	0.787	0.854	0.548
Retirement Planning Intentions	0.913	0.915	0.930	0.623
Mental Accounting	0.851	0.919	0.885	0.614
Retirement planning Behaviour	0.842	0.874	0.887	0.544

4.4.5 Discriminant Validity

The fourth step in assessing the measurement model is to evaluate discriminant validity, which determines whether a construct is empirically unique from other constructs in the model. Traditionally, Fornell and Larcker (1981) suggested comparing each construct's Average Variance Extracted (AVE) to the squared inter-construct correlations, ensuring that the AVE is higher. However, recent research, such as that by Henseler et al. (2015), has shown that this method, particularly the Fornell-Larcker criterion, is not always effective, especially when indicator loadings are similar. As a result, this criterion may not reliably identify issues with discriminant validity, and its use is now discouraged in empirical studies (Radomir & Moisescu, 2020). Table 4.4 shows the results for discriminant validity using the Fornell and Larcker criterion:

Table 4.4: Fornell and Larcker Criterion of Discriminant Validity

Code	Variables	FC	FL	FS	FSO	IRP	MA	RPB
FC	**Financial Cognition**	0.841						
FL	**Financial Literacy**	0.430	0.708					
FS	**Financial Satisfaction**	0.259	0.311	0.828				
FSO	**Financial Socialisation**	0.273	0.464	0.041	0.740			
IRP	**Retirement Planning Intentions**	0.074	0.165	-0.176	0.181	0.789		
MA	**Mental Accounting**	0.548	0.444	0.290	0.175	0.142	0.784	
RPB	**Retirement Planning Behaviour**	0.510	0.582	0.471	0.188	0.018	0.486	0.737

Instead, Henseler et al. (2015) proposed the Heterotrait-Monotrait ratio (HTMT) as an alternative. HTMT is defined as the ratio between the average correlations between indicators of distinct constructs (heterotrait-heteromethod correlations) and the geometric mean of the correlations among indicators within the same construct (monotrait-heteromethod correlations) (Hair et al., 2022). Ideally, the heterotrait-heteromethod correlations (representing the relationships between different constructs) should be as low as possible, while the monotrait-heteromethod correlations (representing relationships within the same construct) should be high. When HTMT values are high, discriminant validity issues may be present. Henseler et al. (2015) suggest a benchmark of 0.90 for constructs that are conceptually similar, where an HTMT value above 0.90 suggests a lack of discriminant validity. For conceptually distinct constructs, a more conservative threshold of 0.85 is recommended. The variables in this study are distinct in terms of their focus and scope. As shown in Table 4.5, all values fall below the recommended threshold for conceptually distinct constructs, indicating adequate discriminant validity.

Table 4.5: HTMT Criterion of Discriminant

Code	Variables	FC	FL	FS	FSo	IRP	MA	RPB
FC	**Financial Cognition**							
FL	**Financial Literacy**	0.569						
FS	**Financial satisfaction**	0.444	0.559					
FSo	**Financial Socialisation**	0.373	0.564	0.169				
IRP	**Retirement Planning Intentions**	0.098	0.167	0.158	0.219			
MA	**Mental Accounting**	0.620	0.474	0.433	0.205	0.136		
RPB	**Retirement Planning Behaviour**	0.658	0.691	0.762	0.250	0.163	0.548	

According to Hair et al. (2012), to establish discriminant validity, each indicator should load higher on its designated construct than on any other construct. Table 4.6 demonstrates that discriminant validity is achieved, as each construct's cross-loadings (bolded) are higher for the corresponding construct than for any other construct in the model.

Table 4.6: Cross-Loadings

						Table 4.6 : Cross- Loadings							
	FC	**FL**	**FPRd**	**FRP**	**FS**	**HRP**	**LRP**	**MA**	**PFS**	**PRP**	**PRd1**	**PeFS1**	**WFS1**
FC1	**0.906**	0.255	0.361	0.125	0.173	0.064	0.064	0.487	0.164	0.039	0.125	0.164	0.022
FC2	**0.825**	0.501	0.489	0.140	0.295	0.005	0.015	0.464	0.258	0.013	0.257	0.240	0.155
FC3	**0.786**	0.456	0.515	0.077	0.240	-0.009	0.029	0.438	0.229	0.026	0.244	0.236	0.156
FL1	0.404	**0.811**	0.462	0.168	0.255	0.128	0.100	0.338	0.337	0.064	0.269	0.292	0.326
FL2	0.332	**0.798**	0.447	0.135	0.215	0.087	0.126	0.299	0.325	0.070	0.211	0.248	0.314
FL3	-0.054	**-0.048**	-0.014	0.105	-0.094	0.042	0.036	0.013	-0.095	0.064	-0.192	-0.004	-0.033
FL4	0.349	**0.751**	0.506	0.121	0.293	0.039	0.026	0.429	0.229	0.040	0.241	0.180	0.196
FL5	0.359	**0.837**	0.499	0.191	0.326	0.111	0.098	0.402	0.312	0.098	0.258	0.202	0.277
FL6	0.283	**0.700**	0.393	0.169	0.274	0.044	0.052	0.317	0.277	0.155	0.229	0.119	0.203
FL8	0.259	**0.675**	0.263	0.128	0.104	0.061	0.094	0.259	0.363	0.067	0.312	0.175	0.227
FPRd1	0.206	0.337	**0.585**	0.081	0.424	-0.035	0.039	0.276	0.101	0.025	0.255	0.037	0.115
FPRd2	0.482	0.409	**0.804**	0.062	0.344	-0.118	-0.045	0.394	0.009	-0.052	0.082	0.147	0.065
FPRd3	0.394	0.432	**0.771**	0.080	0.369	-0.088	-0.068	0.395	0.225	-0.026	0.204	0.067	0.128
FPRd4	0.395	0.473	**0.853**	0.073	0.358	-0.117	-0.027	0.366	0.063	-0.044	0.088	0.070	0.136
FPRd5	0.455	0.527	**0.876**	0.116	0.379	-0.057	0.011	0.404	0.171	-0.023	0.210	0.140	0.155
FPRd6	0.399	0.468	**0.788**	0.072	0.382	-0.085	-0.026	0.378	0.055	-0.058	0.124	0.105	0.170
FRP1	0.161	0.231	0.141	**0.898**	-0.048	0.499	0.602	0.182	0.186	0.583	0.268	0.085	0.080
FRP2	0.089	0.163	0.049	**0.899**	-0.065	0.501	0.613	0.133	0.071	0.586	0.207	0.155	0.056
FS1	0.227	0.254	0.415	-0.078	**0.919**	-0.173	-0.182	0.290	0.034	-0.172	0.097	-0.024	0.107
FS3	0.208	0.280	0.371	-0.010	**0.725**	-0.107	-0.129	0.167	-0.017	-0.097	0.111	0.004	0.113
HRP1	0.022	0.085	-0.133	0.529	-0.200	**0.918**	0.651	0.037	0.097	0.612	0.240	0.126	0.157
HRP2	0.046	0.128	-0.063	0.488	-0.120	**0.911**	0.645	0.095	0.144	0.564	0.146	0.166	0.142
LRP1	0.064	0.133	-0.002	0.640	-0.199	0.693	**0.934**	0.137	0.129	0.702	0.306	0.152	0.123
LRP2	0.028	0.090	-0.045	0.620	-0.158	0.628	**0.930**	0.116	0.082	0.708	0.191	0.133	0.051
MA1	0.246	0.141	0.206	0.024	0.159	0.023	0.020	**0.505**	-0.062	0.012	0.044	-0.022	0.031
MA2	0.403	0.311	0.357	0.052	0.250	0.053	0.036	**0.785**	0.075	0.039	0.168	0.099	0.138
MA3	0.449	0.358	0.425	0.135	0.259	0.093	0.112	**0.860**	0.138	0.088	0.185	0.116	0.103
MA4	0.411	0.404	0.347	0.149	0.219	0.050	0.123	**0.845**	0.110	0.103	0.270	0.109	0.107
MA5	0.550	0.404	0.440	0.204	0.254	0.048	0.147	**0.864**	0.153	0.112	0.225	0.142	0.073
PFS1	0.244	0.330	0.180	0.093	0.072	0.042	0.053	0.100	**0.915**	0.023	0.033	0.268	0.167
PFS2	0.223	0.378	0.134	0.131	0.006	0.129	0.112	0.133	**0.933**	0.065	0.109	0.305	0.192
PFS3	0.188	0.378	0.081	0.167	-0.026	0.186	0.145	0.156	**0.890**	0.118	0.176	0.287	0.300
PRP1	0.093	0.120	-0.020	0.609	-0.160	0.584	0.694	0.112	0.134	**0.902**	0.287	0.191	0.120
PRP2	-0.035	0.098	-0.041	0.558	-0.147	0.571	0.663	0.083	-0.001	**0.894**	0.197	0.042	0.090
PRd1	0.220	0.306	0.206	0.264	0.120	0.212	0.267	0.254	0.117	0.270	**1.000**	0.077	0.133
PeFS1	0.235	0.271	0.121	0.134	-0.016	0.159	0.153	0.137	0.314	0.131	0.077	**1.000**	0.375
WFS1	0.103	0.343	0.153	0.075	0.129	0.164	0.094	0.114	0.241	0.117	0.133	0.375	**1.000**

FC- Financial Cognition, FL- Financial Literacy, FPRd- Financial Retirement Planning Behaviour, FRP- Financial Retirement Planning Intentions, FS- Financial Socialisation, HRP- Health Retirement Planning Intentions, LRP- Lifestyle Retirement Planning Intentions, MA- Mental Accounting- Parental Financial Socialisation- Psychosocial Retirement Planning Behaviour, WFS- Workplace Financial Socialisation

4.5 Assessment of Structural Model

The assessment of the structural model is a crucial process in ensuring the quality and validity of the model. This is done before testing the hypotheses of the study. For this study the assessment was conducted using the multicollinearity test, common method bias test, evaluating the coefficient of determination, the predictive relevance and the significance of the path coefficients.

4.5.1 Assessment of Collinearity in the Structural Model

Collinearity amongst the independent variables in the structural model was examined using the VIF values for the structural relations (Hair et al., 2019). When indicators are highly correlated, the standard error associated with their weights increases, which can lead to false negatives. In extreme scenarios, collinearity can cause sign changes in indicator weights, leading to interpretational confusion (Hair, 2023). Scholars differ in their views on what constitutes an acceptable VIF value to detect multicollinearity. Hair et al. (1995) suggest that a VIF below 10 indicates no multicollinearity, while other studies (Diamantopoulos & Siguaw, 2006; Hair et al., 2011) recommend keeping VIF below 5 to avoid issues. Higher VIF values signal greater collinearity, and a VIF of 5 or above suggests the need for corrective actions, such as removing or merging indicators or creating a higher-order construct (Hair et al., 2022). Collinearity can be present at lower VIF values of 3 (Becker et al., 2015; Mason & Perreault Jr, 1991). When the direction of indicator weights changes unexpectedly, researchers should first compare the relationship sign with the bivariate correlation. If the relationship sign varies from the correlation sign, the model should be revised by adjusting indicators or creating a higher-order construct (Hair et al., 2019; Hair Jr et al., 2023; Sarstedt et al., 2019). In Table 4.7, the VIF results are within the recommended limits, ranging from a lower bound of 1.000 to an upper bound of 1.677. These findings suggest that collinearity does not negatively impact the structural model, as the VIF values are within the acceptable limits.

4.5.2 Common Method Bias

The common method bias was also evaluated using the Harman's One-Factor Test. This test is necessary because the same respondents provided responses for both dependent and independent constructs. Satisfactory test results suggest that respondents did not respond in a socially motivated manner. Common method bias is not a concern when the percentage variance for the first factor is below 50% after conducting the test. The results in Table 4.7 show that the percentage variance for the first factor is 19.74%, well below the 50% threshold, indicating that there is no threat of common method bias in the structural model.

4.5.3 Coefficient of Determination

The coefficient of determination is used to evaluate the explanatory power of the structural model (Hair et al., 2019). The coefficient of determination (R^2) measures the predictive capacity of the PLS-SEM approach, reflecting how much variation in an endogenous variable is explained by its exogenous predictors. In this study, an R^2 value of 11% was observed for retirement planning intentions and 8% for retirement planning behaviour. This indicates that the independent variables: financial satisfaction, financial socialisation, financial literacy, mental accounting, and financial cognition account for 11% of the variation in retirement planning intentions and 8% of the variation in retirement planning behaviour. While benchmarks for interpreting R^2 vary, with values of 0.75, 0.50, and 0.25 typically considered strong, moderate, and weak, it is essential to interpret R^2 within the specific context of the study (Chin, 1998; Hair et al., 2011; Hair et al., 2019; Sarstedt et al., 2021).

4.5.4 Test for Predictive Relevance

Also known as a model's ability to predict future outcomes, out-of-sample predictive power is crucial for assessing its generalizability. To address this, Shmueli et al. (2016) introduced the PLS predict procedure, which focuses on out-of-sample prediction. The method estimates the model using a subset of the data, then tests its predictive capability on a separate holdout set to ensure reliability (Shmueli et al., 2019).

A Q² value above zero suggests the model possesses some degree of predictive accuracy for the construct under study (Chin, 1998). According to Hair et al. (2019), Q² values exceeding 0, 0.25, and 0.50 reflect small, medium, and large predictive relevance, respectively. The results in Table 4.7 indicates a Q² estimation of 0.086 for retirement planning intentions and 0.027 for retirement planning behaviour, thus the model is assumed to have predictive relevance.

Table 4.7: VIF, R^2, and Q^2

Variables	VIF
Financial Cognition	1.565
Financial Literacy	1.677
Financial Satisfaction	1.242
Financial Socialisation	1.291
Retirement Planning Intentions	1.000
Mental Accounting	1.581
	R2
Retirement Planning Intentions	0.113
Retirement Planning Behaviour	0.088
	PLS Predict(Q^2)
Retirement Planning Intentions	0.086
Retirement Planning Behaviour	0.027
Herman One-Factor Model Test	19.74%

4.6 Path Diagram

Figure 4.1 presents the path diagram utilized to guide the hypothesis testing in this study using Smart PLS 4.1.0.6. Based on the study's conceptual framework, this diagram illustrates the relationships between the key variables. Specifically, Figure 4.1 depicts the hypothesized direct relationships among financial satisfaction, financial socialization, financial literacy, and mental accounting on retirement planning intentions, as well as the impact of retirement planning intentions on retirement planning behaviour.

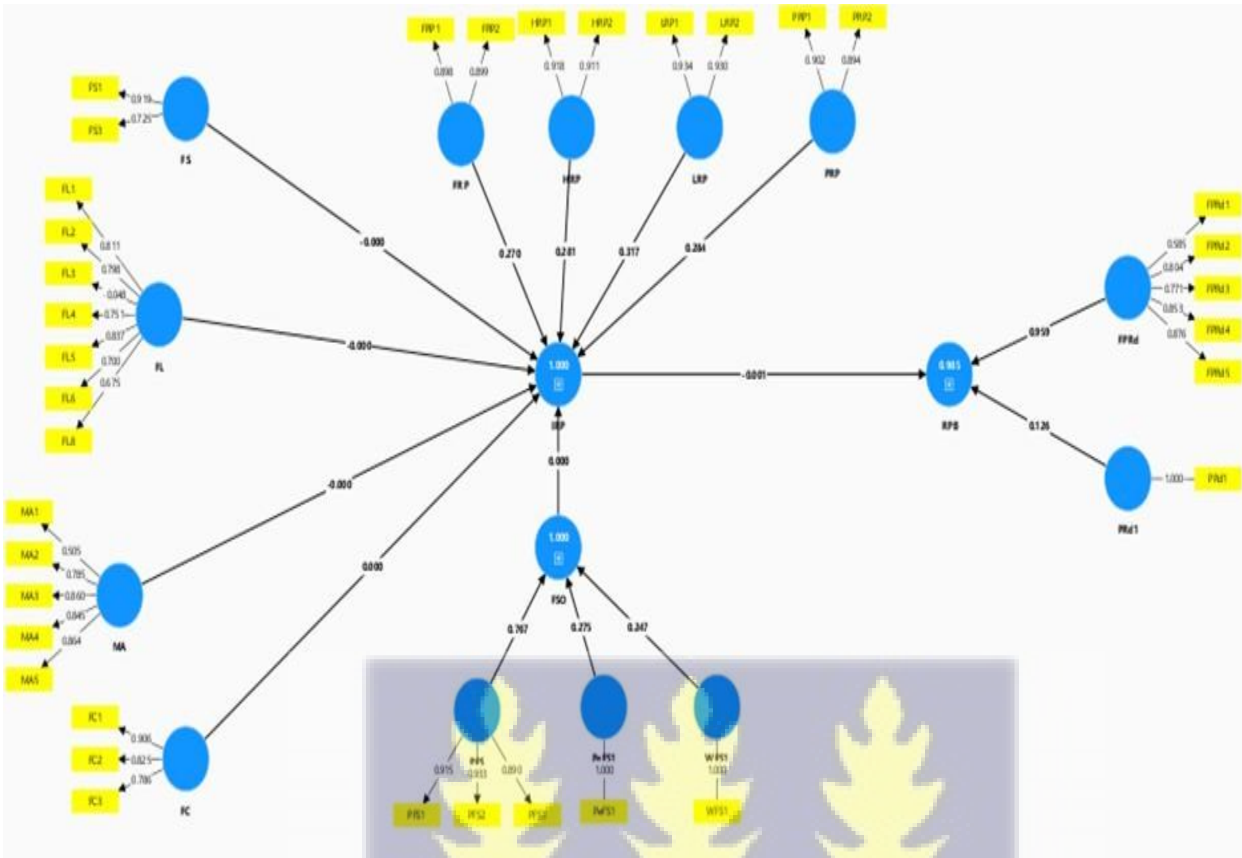

Figure 4.1: Path Diagram

Table 4.8: Co-efficient, P-values for Hypotheses

	Hypotheses	Coefficient	P values
H1	Financial Satisfaction -> Retirement Planning Intentions	-0.273	0.000
H2	Financial Socialisation -> Retirement Planning Intentions	0.131	0.005
H3	Financial Literacy -> Retirement Planning Intentions	0.136	0.004
H4	Financial Literacy -> Financial Satisfaction	0.463	0.000
H5	Financial Literacy -> Mental Accounting	0.439	0.000
H6	Financial Literacy -> Financial Cognition	0.507	0.000
H7	Mental Accounting -> Retirement Planning Intentions	0.170	0.000
H8	Financial Cognition -> Retirement Planning Intentions	-0.033	0.555
H9	Retirement Planning Intentions -> Retirement Planning Behaviour	0.298	0.000

4.7 Discussion of Results

Table 4.8 presents results of the study hypotheses using the bootstrapping technique. As shown in Table 4.8 each of the independent variables except Financial Cognition had a significant relationship with retirement planning intentions.

4.7.1 The Relationship between Financial Satisfaction and Retirement Planning Intentions

Financial satisfaction is conceptualised in this study as "individual's overall sense of well-being, reflected in their health, happiness, and freedom from financial stress". Retirement planning intentions on the other hand, is the individual's willingness to engage in retirement planning. The study hypothesized that the level of an individual's financial satisfaction has a positive effect on retirement planning intentions. The results demonstrate the existence of a negative and statistically significant relationship (path coefficient=-0.273, p-value=0.000) between financial satisfaction and retirement planning intentions. This is an indication that individuals who are financially satisfied are less likely to engage in retirement planning.

Contrary to the hypothesis of the study and the evidence by some empirical studies (Ali et al., 2015; Dare, 2020; Nyström & Romberg, 2017; Xiao et al., 2014), the study's findings suggest that individuals who are financially satisfied in life are less motivated to plan for their retirement. The argument is that when individuals experience a high level of financial satisfaction, they often feel secure in their current financial state. This sense of security can lead to a false sense of long-term financial stability, where individuals believe that their present resources and financial habits will be sufficient for the future. As a result, they may not feel the immediate need to actively engage in retirement planning. These individuals might assume that because they are doing well now, their future financial needs, including those for retirement, will naturally take care of themselves. This belief can lead to complacency, where there is little motivation to prepare for the financial challenges of old age, such as healthcare costs, a potential decline in income, and the growing cost of living.

The negative relationship between financial satisfaction and retirement planning intentions highlights a dangerous complacency. Financial satisfaction may mask the need for future financial preparation, especially in a context where traditional support systems are weakening, and life expectancy is rising. This dynamic reinforces the need for targeted interventions to ensure that all individuals, regardless of their current financial satisfaction, actively plan for retirement to avoid future economic vulnerability.

4.7.2 The Relationship Between Financial Socialisation and Retirement Planning Intentions

The results indicate a positive and a highly significant relationship (path coefficient =0.131, p value = 0.005) between financial socialization and retirement planning intentions. This suggests the financial socialization process of an individual ("the social process through which an individual acquires relevant financial knowledge and skills") has important implications on their retirement planning decisions. From the results, individuals who are financially socialised tend to have a positive disposition towards retirement. Such individuals therefore have greater intentions to plan towards their retirement while in active service. The argument is that the level of engagement by an individual on financial matters with the different social networks equip such individuals with valuable insights, encouragement, and practical advice on the financial implications of their decisions. Such individuals, therefore, have greater intentions to plan for their retirement.

This is consistent with the literature (LeBaron-Black et al., 2023; Norvilitis, 2023; Robertson-Rose, 2020) that generally highlights the importance of financial socialization in shaping financial behaviours of people. In this context, informal sector workers who engage in financial discussions and learn from their social networks are more likely to plan for retirement. This finding supports the hypothesis that financial socialisation significantly influences retirement planning intentions.

Financial socialization, particularly through family education, has an indirect effect on retirement planning behaviour (Kimiyaghalam et al., 2017). Families play a crucial role in imparting financial knowledge, attitudes, and behaviours, which in turn influence individuals' confidence and capability to plan for their financial futures. Similarly, Kimiyagahlam et al. (2019) find that parental influence has a significant effect on retirement planning, underscoring the impact of early financial education and modelling on long-term financial outcomes.

Moreover, financial socialization extends beyond family influences to include interactions with peers, media, and the working environment. Engaging in financial discussions within these social networks can provide individuals with valuable insights, encouragement, and practical advice in handling financial issues, further enhancing their retirement planning intentions.

4.7.3 The Relationship Between Financial Literacy and Retirement Planning Intentions

Consistent with the proposition of H3, the results demonstrate a positive and statistically significant relationship between financial literacy and retirement planning intentions (path coefficient = 0.136, p value = 0.004). The implication is that higher levels of financial literacy ("the ability to comprehend financial concepts and risks, and to use this understanding to make sound financial decisions") positively impacts retirement planning intentions among informal sector workers in Ghana. This implies that workers who are financially literate are more likely to undertake retirement planning activities.

Individuals who are financially literate are more adept at understanding the importance of saving and investing for the future. They possess the ability to make informed financial decisions that support their long-term goals, including those related to retirement. This competency is reflected in their ability to evaluate financial products and services, manage personal finances effectively, and foresee future financial needs. As a result, financially literate individuals are more likely to take proactive steps towards ensuring financial security in their retirement years.

The empirical literature on financial literacy supports the proposition that higher levels of financial literacy is associated with stronger intentions to plan towards retirement (García Mata, 2021; Herrador-Alcaide et al., 2021; Kimiyagahlam et al., 2019; Qian et al., 2024). Financially literate individuals are more capable of understand and utilize financial products, manage risks, and engage in long-term planning (Lusardi, 2019).

Their capacity to make informed decisions about savings, investments, and risk management leads to more effective retirement planning.

This understanding of financial concepts encourages individuals to start saving early, manage their finances more effectively, and avoid impulsive spending. Enhanced financial literacy also builds confidence in making strategic financial decisions, which supports proactive retirement planning. Thus, improving financial literacy among informal sector workers can significantly enhance their ability to prepare for retirement, highlighting the need for targeted financial education initiatives.

4.7.4 The Relationship Between Financial Literacy and Financial Satisfaction

Hypothesis 4 of this study proposed a positive relationship between financial literacy and financial satisfaction. From the results of the path analysis, the study finds that financial literacy positively impacts financial satisfaction significantly (coefficient =0.463, p value=0.000). This means that being financially literate is associated with higher levels of financial satisfaction. In this context, informal sector workers who are financially literate might feel more confident and satisfied with their financial situation.

Financial literacy provides individuals with the relevant knowledge to execute financial tasks and understand financial concepts and products. It provides the opportunity to use this knowledge in real-world scenarios to achieve financial satisfaction. Individuals who are financially literate also have a greater disposition to display positive financial behaviours that contribute to improving their financial satisfaction. Ali et al. (2015) find that financial satisfaction is a desirable outcome of being financially literate.

This finding is further supported by existing literature (Adiputra, 2021; Hasibuan et al., 2018a; Kengatharan et al., 2020; Kirbiš Škreblin et al., 2017; Madinga et al., 2022; Natsir et al., 2020), which consistently highlights the positive relationship between financial literacy and financial satisfaction. This consensus underscores the importance of promoting financial literacy to improve financial well-being, especially among informal sector workers.

Promoting financial literacy, particularly among informal sector workers, is crucial for fostering financial stability and satisfaction. Given their often-precarious financial situations, targeted financial education programs could empower these workers to make informed financial decisions, ultimately improving their quality of life.

4.7.5 The Relationship Between Financial Literacy and Mental Accounting

The results from the examination of the fifth hypothesis, which examines how financial literacy influences mental accounting (A mental process that helps individuals budget and track their spending and savings), indicates a statistically significant positive relationship (coefficient = 0.439, p value =0.00). The positive relationship indicates that financial literacy enhances mental accounting practices. Informal sector workers who are financially literate are more likely to use mental accounting to manage their finances effectively.

The enhancement of mental accounting practices through financial literacy is beneficial for overall financial management. Individuals who utilize mental accounting can better control their spending, avoid unnecessary debt, and achieve their financial goals. This practice contributes to improved financial stability and reduces financial stress, as individuals can clearly see where their money is going and how it aligns with their financial plans.

Supporting literature backs these implications. For instance, Baker et al. (2019) find that financial literacy is positively correlated with mental accounting, suggesting that individuals with higher financial knowledge are more likely to engage in mental accounting practices. Similarly, Muehlbacher and Kirchler (2019) find that the practice of mental accounting is correlated with higher financial knowledge, reinforcing the idea that financial literacy supports sound financial management strategies.

This effect fosters financial discipline and long-term planning. By allocating funds more purposefully, financially literate individuals can better anticipate future expenses and adapt their budgets to changing circumstances, which is particularly crucial for informal sector workers who often face income instability.

4.7.6 The Relationship between Financial Literacy and Financial Cognition

The results from the assessment of the structural model suggests a positive and statistically significant relationship between financial literacy and financial cognition (coefficient = 0.507, p value =0.000). The strong positive relationship highlights that financial literacy significantly improves financial cognition-"A process through which individuals develop beliefs, attitudes, and behaviors related to financial thinking". For informal sector workers, increasing financial literacy could enhance their ability to understand and manage financial concepts effectively. This means that as individuals' financial literacy improves, their understanding, beliefs, attitudes, and actions regarding financial matters likewise improve. For informal sector workers, enhancing financial literacy can also lead to better financial decision-making and management, which is crucial for their economic stability and growth.

Research by Van Rooij et al. (2011) shows that individuals who are financially literate exhibit improved financial cognition abilities, which leads to more effective financial planning, including retirement planning. While financial cognition strongly correlates with financial literacy, financial decision-making may still be affected by cognitive biases. Agarwal and Mazumder (2013) highlight that limited cognitive capacity is associated with increased difficulty in making sound financial decisions, underscoring the importance of both financial literacy and cognitive skills in achieving sound financial outcomes.

4.7.7 The Relationship between Mental Accounting and Retirement Planning Intentions

The results show a positive and significant relationship between mental accounting and retirement planning intentions (coefficient =0.170, p value =0.00). This means that mental accounting, positively impacts retirement planning intentions. Informal sector workers in Ghana who engage in mental accounting practices are more likely to have intentions to plan for retirement, possibly because they allocate specific funds for future needs. This connection is likely due to the practice of allocating specific funds for future needs, making retirement planning a more deliberate and structured part of their financial management.

This relationship can be understood through the lens of how mental accounting structures financial thinking and decision-making. When individuals categorize their finances into different mental accounts, they are more aware of their spending and savings patterns. This awareness naturally extends to long-term financial planning, such as retirement. By assigning funds to specific future needs, individuals make retirement planning a regular and integral part of their financial behaviour.

The findings align with previous research. Hardin and Looney (2012) find that mental accounting, where "individuals treat money differently based on its source or planned use, also played a significant role in shaping their savings goals and long-term investment decisions. Research by Soman (2004) also suggests that effective mental accounting can lead to better financial decisions, including the commitment to long-term financial goals like retirement planning. Similarly Choi (2015) find that mental accounting influenced how individuals perceived and managed their contributions, often leading them to compartmentalize their savings in ways that were not always optimal.

Fostering mental accounting practices among informal sector workers can be a valuable tool in enhancing retirement planning intentions. By encouraging the compartmentalization of finances and emphasizing future-oriented saving, mental accounting can help individuals adopt more disciplined financial behaviours, ultimately improving their preparedness for retirement.

4.7.8 The Relationship between Financial Cognition and Retirement Planning Intentions

In testing the structural relationship between financial cognition and retirement planning intentions, the results suggest that financial cognition, defined in this study as the process of forming "individuals' beliefs, attitudes, and actions towards financial thinking", does not significantly impact retirement planning intentions among informal sector workers in Ghana (coefficient=-0.033 with a p-value= 0.555. This finding runs contrary to the expectation that financial cognition would have an impact on retirement planning intentions.

The non-significant relationship between financial cognition and retirement planning intentions indicates that for informal sector workers in Ghana, the process of forming beliefs, attitudes, and actions towards financial thinking does not notably influence their intentions to plan for retirement. This underscores the need to consider other factors that might play a more crucial role in shaping retirement planning intentions in this demographic. The literature suggests that cognitive biases influence financial decision-making. For instance, Agarwal and Mazumder, (2013) indicate that individuals with reduced cognitive skills often experience greater difficulty managing financial matters. Similarly, Christelis et al. (2010) and McArdle et al. (2009) argue that individuals must develop their cognitive abilities to be able to make informed financial decisions effortlessly.

The descriptive analysis of the survey data indicates that the sampled informal sector workers have low educational levels, with the majority having received education only up to the Senior High School level or lower, and some having received no education at all. This low level of education might result in insufficient exposure to financial concepts, thus affecting their financial cognition. Darbi (2016) and Koto (2015) confirm that the informal sector in Ghana is primarily composed of people with low levels of education, which can hinder their financial decision-making.

Furthermore, the majority of the sampled demographic earns less than 500 Ghana cedis per month, which limits their ability to save and plan for retirement. This economic constraint makes immediate financial needs a priority over long-term planning. Ahmad et al. (2014) find that less educated individuals and lower-income earners generally have lower financial knowledge and lack good financial practices. These factors contribute to the overall financial behaviour of informal sector workers and their limited engagement in retirement planning.

Enhancing financial literacy, improving income stability through support initiatives and microfinance, and leveraging technology with mobile apps and digital literacy programs are crucial for improving retirement planning among Ghana's informal sector workers.

4.7.9 The Relationship between Retirement Planning Intentions and Retirement Planning Behaviour

As expected, retirement planning intentions shows a positive and significant effect on retirement planning behaviour (coefficient = 0.298, p-value = 0.00). This indicates a strong and meaningful relationship between intentions and actual retirement planning actions. Among informal sector workers in Ghana, those with the intention to plan for retirement are significantly more likely to take concrete steps toward achieving that goal, demonstrating that their intentions successfully translate into tangible behaviours. Empirical research consistently shows that individuals with strong retirement planning intentions are more likely to engage in behaviours that enhance their financial security (Hershey et al., 2007). Similarly, Yeung and Zhou (2017) find that preretirement planning activities, which reflect strong planning intentions, were linked to greater accumulation of retirement resources. This suggests that having the intention to plan for retirement often leads to actions that improve financial preparedness. Noone et al. (2009) also observed that individuals who discussed retirement and made savings plans, signalling their planning intentions, experienced higher retirement satisfaction and well-being, demonstrating that their intentions led to concrete actions, such as establishing savings plans.

4.7.10 The Mediating Effect of Retirement Planning Intentions

From the results, retirement planning intentions partially mediate the relationships between financial literacy, financial satisfaction, financial socialisation, and mental accounting with retirement planning behaviour. There is no mediation effect for financial cognition.

The partial mediation of retirement planning intentions in the relationships between financial literacy, financial satisfaction, financial socialization, and mental accounting with retirement planning behaviour means that these factors affect retirement planning behaviour both directly and indirectly by shaping individuals' intentions to plan. While these factors alone influence how people prepare for retirement, they also help form intentions, which in turn lead to actual planning actions.

On the other hand, the lack of mediation for financial cognition suggests that it does not significantly impact retirement planning behaviour by shaping intentions among this demographic. This means that while financial cognition might influence how individuals think about financial matters, it does not necessarily motivate them to turn those thoughts into retirement planning actions. Other variabless, such as financial literacy, satisfaction, and mental accounting, play a more important role in influencing both intentions and behaviour.

Table 4.9: Mediation Results

	Hypotheses	**Coefficient**	**Pvalues**
H10	Financial Cognition -> Retirement Planning Intentions -> Retirement Planning Behaviour	-0.017	0.280
H11	Financial Literacy -> Retirement Planning Intentions -> Retirement Planning Behaviour	0.045	0.008
H12	Financial Satisfaction-> Retirement Planning Intentions -> Retirement Planning Behaviour	-0.068	0.000
H13	Financial Socialisation -> Retirement Planning Intentions -> Retirement Planning Behaviour	0.044	0.003
H14	Mental Accounting -> Retirement Planning Intentions -> Retirement Planning Behaviour	0.045	0.004

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

This chapter provides a summary of all the major issues discussed in this thesis. The chapter highlights the key findings from the study, discusses the implications of the study findings and major conclusions that can be drawn from these findings. The main contributions to literature as well as the limitation of the study are also discussed in this chapter. The structure of the chapter is as follows: first, a comprehensive summary of the study is presented, followed by conclusions drawn from the findings and a discussion of their implications. Next, the theoretical contributions of the thesis are outlined, and the study's limitations are discussed. Finally, recommendations for potential areas of future research are provided.

5.1 Summary and Conclusion of the Study

Financial planning, particularly retirement planning, has become increasingly crucial in today's world due to rising life expectancies, evolving economic conditions, and shifting social structures. Globally, the importance of securing one's financial future through structured planning is recognized as essential for maintaining quality of life during retirement. In both developed and developing nations, individuals are encouraged to adopt a proactive approach to financial planning to ensure they are financially independent when they can no longer work. The volatility of economies, coupled with insufficient social security systems in many countries, has made personal financial planning a necessity rather than a luxury.

In Africa, retirement planning remains an evolving concept. While traditional support systems such as extended families once played a pivotal role in caring for the elderly, modernization and urbanization have weakened these structures. Increasingly, individuals can no longer rely solely on family support in their later years, making personal financial planning critical. Despite this, financial literacy remains relatively low across the continent, and many people lack access to formal retirement savings schemes. Consequently, there is an urgent need to promote financial education and planning to enable individuals to secure their futures.

In Ghana, retirement planning is gaining attention, particularly as the population ages and the traditional safety nets weaken. The government has implemented formal pension schemes for workers in the formal sector, such as the Social Security and National Insurance Trust (SSNIT). However, coverage remains limited, and only a small proportion of the working population actively contributes to these schemes. Among those in the informal sector, which constitutes about 80-85% of Ghana's workforce, the situation is even more challenging. Most informal sector workers are not covered by formal pension systems and must depend on personal savings or family support for retirement, which often proves inadequate.

This group faces unique challenges when it comes to retirement planning. Their irregular and often low incomes make it difficult to set aside money for future needs. Moreover, many lack access to formal financial products, such as retirement savings accounts, and are often not included in financial literacy programs. Despite these obstacles, it is critical for informal sector workers to engage in financial planning for retirement.

Given the vulnerability of informal sector workers who often face financial insecurity in later years due to the absence of structured pension plans the need for retirement planning in this group cannot be overstated. Without proper planning, many experience economic hardship in old age, depending solely on family or state welfare, both of which are increasingly unreliable. Thus, promoting financial literacy and retirement planning among informal sector workers is key to ensuring their long-term financial security.

This thesis examines the factors influencing retirement planning intentions and retirement planning behaviour among informal sector workers in Ghana. Key constructs examined include mental accounting, financial cognition, financial socialization, financial literacy, and financial satisfaction. The thesis used the structural equation modelling technique to assess both direct and indirect relationships between these variables and retirement planning outcomes.

The findings suggest that financial literacy, financial socialization, and mental accounting all had a positive and significant impact on retirement planning intentions. Retirement planning intentions was found to partially mediate the relationship between these factors and actual planning behaviour, suggesting that these constructs play a crucial role in shaping individuals' preparedness for retirement. However, financial cognition did not significantly influence retirement planning intentions or behaviour, indicating that cognitive financial skills alone do not lead to effective retirement planning among this population. As anticipated, retirement planning intentions had a positive and significant impact on retirement planning behaviour, indicating a strong and meaningful link between intentions and actual retirement planning behaviours. Among informal sector workers in Ghana, individuals who intend to plan for retirement are significantly more likely to take concrete steps toward that goal, showing that their intentions effectively translate into practical behaviours.

More interestingly, the thesis finds a negative but significant relationship between financial satisfaction and retirement planning intentions, suggesting that individuals who feel financially secure are less likely to engage in retirement planning. This counterintuitive result implies that financial satisfaction may create a sense of complacency, where individuals believe their current financial stability reduces the need for long-term planning. Those who are satisfied with their finances may focus on short-term needs or assume that their present resources will suffice for future retirement needs, potentially leading them to underestimate the financial demands of retirement. In the context of Ghana and similar societies, this becomes even more concerning due to the weakening of traditional safety nets, such as family and community support, that were once relied upon to care for the elderly. As these structures weaken, individuals who fail to plan for retirement may face significant financial difficulties in old age, emphasizing the critical role of thorough financial literacy and public awareness efforts programs to encourage long-term planning, even among those who feel financially satisfied today.

The results underscore the need for tailored interventions to improve financial literacy, enhance social support, and encourage mental accounting practices among informal sector workers. Strengthening these areas can help promote better retirement planning and financial security in later life. Furthermore, policies aimed at increasing income stability and providing accessible retirement planning resources would address some of the economic challenges faced by this group, ensuring greater financial independence in old age.

5.2 Implications of Findings

The findings of the study carry significant implications for academics, policymakers, and organizations/practitioners, particularly in understanding and improving retirement planning behaviour within the informal sector in Ghana.

For academics, this study highlights the need to explore further the complexities of financial behaviour, especially in relation to financial satisfaction and retirement planning. The negative but significant relationship between financial satisfaction and retirement planning intentions challenges conventional assumptions about the positive influence of financial well-being on future planning. Researchers could delve deeper into the psychological and socio-economic factors driving this relationship, and how it might vary across different demographics. Additionally, the use of the theory of financial planning behaviour in this context underscores the importance of integrated frameworks that provide a thorough understanding of financial decision-making, particularly in under-researched populations like informal sector workers.

For policymakers, the study reveals the urgent need to address gaps in retirement planning among informal sector workers. With the weakening of traditional safety nets and the overreliance on current financial stability, there is a critical role for government and public institutions in promoting financial literacy and long-term financial planning. Policies could be geared towards creating accessible and inclusive financial education programs that specifically target the informal sector. Further, developing pension schemes or savings mechanisms tailored to the income patterns of informal workers could help mitigate the risk of old-age poverty.

For organizations and practitioners, such as financial institutions and non-governmental organizations, the study emphasizes the importance of practical interventions that enhance retirement planning behaviour. Financial institutions could design products that encourage saving for retirement, even among low-income earners, by offering flexible, low-barrier entry points. Additionally, pension service providers can work closely with community groups to deliver financial literacy programs and retirement planning workshops. Practitioners could also leverage mobile technology and digital platforms to improve financial inclusion, making it easier for informal sector workers to save and invest for their future. This can ultimately foster a culture of proactive financial planning that is sustainable in the long term.

5.3 Contributions

This work adds considerable value to both academic literature and practical applications related to financial planning and retirement behaviour, particularly within the context of the informal sector in Ghana.

First, the study expands the academic understanding of retirement planning intentions and behaviour by focusing on informal sector workers, a demographic that is often overlooked in financial planning research. By examining factors such as financial literacy, satisfaction, socialization, cognition and mental accounting, the study sheds light on the unique challenges and motivations of this group, offering insights that differ from those observed in formal sector workers. Data was collected from workers in the services, construction, and manufacturing sectors within the informal economy, offering a comprehensive view of how financial planning operates across various types of occupations and income levels. This provides a more nuanced understanding compared to patterns observed among formal sector workers.

Second, the study contributes to the application of the theory of financial planning behaviour in a practical context. By using this theory to investigate retirement planning among informal sector workers in Ghana, the research integrates fragmented knowledge on financial behaviour and offers new insights into how cognitive and social factors influence retirement planning. This theoretical contribution helps bridge gaps in the literature, providing a holistic framework for future studies in the field of financial planning and retirement.

Finally, the study contributes practical implications relevant to both policymakers and practitioners. The findings provide evidence that can guide the development of targeted financial literacy programs and policies designed to improve retirement outcomes for informal sector workers. By identifying the negative but significant relationship between financial satisfaction and retirement planning intentions, the research highlights the need for strategies that counteract complacency and encourage long-term financial planning. This can help shape policies and financial products that better serve the needs of a vulnerable yet critical segment of the workforce in Ghana and similar economies.

5.5 Limitation of the Study

This study, while offering valuable insights into retirement planning behaviour among informal sector workers in Ghana, has certain limitations that must be acknowledged.

One key limitation is the reliance on purposive sampling, potentially restricting the applicability of the results to a broader population. The informal sector is vast and diverse, encompassing various occupations and income levels. Since the sample may not wholly represent the broader population, the results might not accurately reflect the experiences and behaviours of all informal sector workers in Ghana. Future studies could employ more robust sampling techniques to ensure a more representative sample.

Another limitation is the cross-sectional design of the study, which collects data at one point in time. This restricts the ability to measure changes in financial planning behaviour and retirement intentions over time. Retirement planning is a long-term process, and individuals' attitudes and behaviours may evolve as they age, experience changes in income, or receive financial education. A longitudinal study could help uncover how these factors affect retirement planning at different stages of life.

Lastly, while the study explores several factors influencing retirement planning, it does not account for other potentially significant variables such as health status, family obligations, or cultural norms, which could also impact retirement planning behaviour. Incorporating these factors into subsequent studies would offer deeper insight into the underlying dynamics.

5.6 Recommendations

Drawing from the study's outcomes and its stated limitations, several recommendations are offered for future research, policymakers, and practitioners.

First, given the relevance of financial literacy in shaping retirement planning behaviour, the study recommends that targeted financial education programs be developed and implemented specifically for informal sector workers in Ghana. These programs should focus on improving financial knowledge, encouraging mental accounting practices, and promoting long-term financial planning. Educational interventions can be delivered through community-based workshops, media campaigns, and collaborations with trade associations to increase accessibility and engagement.

Second, policymakers should consider designing retirement schemes or financial products adapted to the unique needs of informal sector workers. Given the diversity in occupations and income levels within this sector, flexible savings and investment options that account for irregular income streams and limited financial literacy could increase participation in retirement planning. Additionally, incentivizing informal workers to contribute to voluntary pension schemes through tax breaks or government matching programs may encourage higher participation rates.

Third, subsequent research should address the limitations of this study by adopting longitudinal designs to track changes in retirement planning behaviour over time. A more representative sampling strategy would also be beneficial to capture the diversity of the informal sector more accurately. Furthermore, integrating objective financial data, such as savings records or pension contributions, could provide a more accurate assessment of financial behaviours and outcomes.

Finally, future research and interventions should consider additional factors such as health status, family responsibilities, and cultural norms that may influence retirement planning behaviour. A holistic approach that addresses these broader contextual variables could result in more effective policy interventions and provide clearer insight into the challenges faced by informal sector workers in planning for retirement.

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APPENDIX

QUESTIONNAIRE

This questionnaire aims to gather insights on "Factors that Influence the Retirement Planning Behaviour of Individuals in the Informal Sector." The goal of this study is to assess the various factors impacting the retirement planning behaviour of informal sector workers. All information provided by participants will be kept strictly confidential and used solely for research purposes. Participation in this survey is entirely voluntary.

Please take a moment to respond to the questions with genuine consideration. Your input is valuable for our research. Thank you for your participation.

SECTION A: DEMOGRAPHIC INFORMATION

Indicate your gender:

a. Male **b. Female**

Indicate your age:

a. Below 25 years b. 25 years to 34 years c. 35years to 49 years

d. 50 years and above

Indicate your level of education:

a. SHS/SHTS b. Diploma c. Undergraduate d. Masters e. Other.

Indicate your occupation type:

a. Services b. Construction c. Manufacturing

Kindly indicate your years of experience:

a. Less than 3years b. 3 to 5years c. 6 to 10years d. 11 to 20years e. Above 20years

Kindly Indicate you Income Range

a. Less than GHC 500 b. GHC 500 to GHC 1,500 c. 1,501 to GHC 2,500 d. Above GHC 2,500

SECTION B:

Kindly indicate your level of agreement to each of these questions on ***Financial Satisfaction*** on a 7- point Likert scale with ***1=strongly disagree and 7= strongly agree***. People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on any one statement.

General wellbeing that describes individuals being healthy, happy, and free from financial worry. Adopted from Ali et al. (2015)

Financial Satisfaction								
where 1= Strongly disagree and 7=Strongly agree								
		1	**2**	**3**	**4**	**5**	**6**	**7**
FS1	I am satisfied with my current financial situation							
FS2	I can do little to improve my current financial situation							
FS3	I rarely run short of money							
FS4	Sometimes I feel that my income does not quite cover my living costs							
FS5	If I had a major loss of income, I could manage for a period of time (e.g. for 3 months)							
FS6	Based on my current financial situation, I could easily obtain a loan if I needed one							

The following statements assess an individual's ***Financial Socialization*** experiences. People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement. Kindly indicate your level of agreement to each of these statements by a ***[✓] on a scale of 1 to 7 where 1= Strongly disagree and 7= Strongly agree.***

Social process that an individual goes through in acquiring relevant financial knowledge and skills. Hira et.al (2013)

Financial Socialisation								
where 1= Not Often and 7= Very Often								
Parental Influence		**1**	**2**	**3**	**4**	**5**	**6**	**7**
PFS1	When you were growing up, how often did your parents talk with you about how to handle money?							
PFS2	When you were growing up, how often did your parents talk with you about the importance of saving money for the future							
PFS3	My parents advised me when I was young on how to invest							
Peer Influence								
PeFS1	How often have you obtained information about investing from friends or colleagues							
Media Influence								
MFS1	How often have you obtained information about investing from the Internet; TV programs; radio programs; newspapers, magazines, newsletters or books							
Workplace Influence								
WFS1	How often have you obtained information about investing from your workplace? Would you say never, seldom, sometimes, often, or very often							

The following statements evaluate an individual's level of **Financial Literacy.** Kindly indicate your level of agreement to each of these statements by ***a [✓] on a scale of 1 to 7 where 1= Strongly disagree and 7=Strongly agree***. People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement.

The knowledge and understanding of financial concepts, risks, and skills and applying such knowledge into effective financial decision making. Adopted from Consumer Financial Protection Bureau

Financial Literacy								
where 1= Strongly disagree and 7=Strongly agree								
		1	**2**	**3**	**4**	**5**	**6**	**7**
FL1	I know much about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)							
FL2	I feel confident when I make decisions about financial services and products (like banks accounts, loans, insurance, credit cards, banks, and financial counsellor)							
FL3	I have never sought financial advice or information to help with money troubles, or set money goals							
FL4	I set long-term financial goals and strive to achieve them							
FL5	I plan and implement a regular savings/investment schedule							
FL6	I feel credit cards are safe and risk- free							
FL7	I am uncertain about where my money is spent							
FL8	I read to increase my financial knowledge.							

The following statements evaluate an individual's *Intention* ***to Plan for Their Retirement.*** Kindly indicate your level of agreement to each of these statements *by* ***a [ ] on a scale of 1 to 7 where 1= Strongly disagree and 7= Strongly agree.*** People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement.

Before individuals undertake goal-related behaviour, they must decide about the efficacy and timing of these behaviours. Adopted from Noone et.al (2010)

A Decision to Prepare for Retirement.								
where 1= Strongly disagree and 7=Strongly agree								
		1	**2**	**3**	**4**	**5**	**6**	**7**
Financial Planning for Retirement								
FRP1	It's too early for me to start thinking about my retirement finances.							
FRP2	I'd rather deal with any financial issues closer to retirement, rather than making financial provisions now							
FRP3	I know that people in my age group are making financial preparations for retirement							
FRP4	It's worthwhile to make financial provisions for retirement.							
Health planning for Retirement								
HRP1	It's too early for me to consider my long-term health							
HRP2	I'd rather deal with any health issues when they arise rather than prepare for them now.							
Lifestyle Planning for Retirement								
LRP1	It's too early for me to start thinking about how I will spend my time in retirement.							
LRP2	I'd rather decide what to do with my time once I retire, rather than think about it now.							
LRP3	I know that people in my age group are developing new ways to spend their time.							
LRP4	It's worthwhile to develop new activities for retirement.							

Psychosocial Planning for Retirement	

PRP1	It's too early for me to consider my roles as a retired person.							
PRP2	I'd rather deal with any issues regarding my future roles when they arise, rather than prepare for them now.							
PRP3	I know that people in my age group are preparing for changes to their roles.							
PRP4	It's worthwhile to prepare for changes to my roles as a retired person.							

The following statements evaluate an individual's ***Mental Accounting* practices.** Kindly indicate your level of agreement to each of these statements ***by a [ ] on a scale of 1 to 7 where 1= Strongly disagree and 7= Strongly agree.*** People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement.

A process for individuals to keep track of their financial activities, savings, and spending decisions by allotting a limited budget to different categories. Adopted from Muehlbacher & Kirchler (2019)

Mental Accounting								
		1	**2**	**3**	**4**	**5**	**6**	**7**
MA1	It is important to me to keep track of my financial activities precisely.							
MA 2	I keep a record of my earnings and expenses.							
MA3	I could at least say roughly how much I have spent this month.							
MA4	I classify my expenses into different categories (e.g., clothing, entertainment, education.)							

MA5	Generally, I am someone others would describe as "Well organized".							

The following statements evaluate an individual's level **of *Financial Cognition***. Kindly indicate your level of agreement to each of these statements **by *a [ ] on a scale of 1 to 7 where 1= Strongly disagree and 7= Strongly agree.*** People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement.

A process of formation on individuals' beliefs, attitudes, and actions towards financial thinking Adopted from Archuleta et.al (2021).

Financial Cognition								
		1	**2**	**3**	**4**	**5**	**6**	**7**
FC1	I can predict the situations when I will spend more than I meant to							
FC2	I know what I should do differently to manage my money better.							
FC3	I know what motivates me to spend or save the way I do.							

The following statements evaluate an individual's ***Retirement Preparedness.*** Kindly indicate your level of agreement to each of these statements *by* ***a [ ] on a scale of 1 to 7 where 1= Strongly disagree and 7= Strongly agree.*** People use the following statements to describe themselves. Please record the response that indicates how you generally feel. There are no right or wrong answers. Do not spend too much time on one statement.

Preparing for Retirement								
where 1= Strongly disagree and 7=Strongly agree								
		1	**2**	**3**	**4**	**5**	**6**	**7**
Financial Retirement Preparedness								
FPRd1	If I was forced to retire today, I would have enough money to cope well with retirement.							
FPRd2	If I was forced to retire at age 60, I would have enough money to cope well with retirement.							
FPRd3	Members of my household are able to put aside or invest a sufficient proportion of our income.							

FPRd4	By the time I retire, I will have sufficient income to ensure the standard of living I want in retirement.							
FPRd5	By the time I retire, I will own a house without a mortgage.							
FPRd6	By the time I retire, I will have enough money to pay for any unexpected expenses							
Health Retirement Preparedness								
HPRd1	I only eat foods that will benefit my long-term health.							
HPRd2	I avoid all unhealthy behaviours.							
HPRd3	I try to keep physically active (e.g., by taking regular walks, playing sports, or doing yoga, etc.).							
HPRd4	I never get medical screening for diseases such as cancer, diabetes, and heart disease.							
HPRd5	I never have general medical check-ups.							
Lifestyle Retirement Preparedness								
LPRd1	There are many things I could do with my time if I was forced to retire today.							
LPRd2	I have recently taken up new interests, activities, or hobbies.							
LPRd3	I have many interests outside of work that I would like to pursue							
Psychosocial Retirement Preparedness								
PRd1	I am reducing or will soon reduce my work hours.							