

**THE EFFECT OF FINANCIAL LITERACY ON PENSION PREPAREDNESS
AMONG MEMBERS OF THE INFORMAL SECTOR IN KENYA**

BY

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DECLARATION

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This research project is my original work and has not been submitted for the award of a degree in any other university.

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Declaration by the Supervisor

This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

This research project is dedicated to my wife Mary and my son Wesley. I couldn't have completed this without their support and encouragement through my academic journey. Their patience during my long nights was not in vain.

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ABSTRACT

Saving for old age is one of the most important decisions individuals have to make over their lifespan. It has been found that financial literacy helps individuals plan for their retirement adequately but efforts to test this in the informal sector has been rare. In Kenya, like any other country in the world, relatively low levels of financial literacy have been reported. Although some studies have been done locally on the formal sector, little is known on the informal sector. This study therefore sought to find level of awareness and participation among informal sector members on the existing pension schemes, finding the literacy level of the members of the informal sector and finally seeking to find if there existed a relationship between financial literacy and pension preparedness among members of the informal sector. This study used a descriptive survey design. Stratified random sampling method was used to pick small scale traders from each of the five categories namely second hand clothes dealers, small shops and Kiosks, Jua Kali Artisans, and vegetable & fruit vendors in some of the busy markets in Nairobi. The sample size for the study was 150 respondents. Primary data was collected using questionnaires. Data was analyzed using descriptive statistics such as percentages and frequencies. A regression analysis was done on retirement preparedness and financial literacy. The findings of the quantitative data were presented in tables, figures and charts. The study revealed that only 36.8 % of the informal sector workers in Nairobi were covered by the formal pension schemes. Although the study found a high level of awareness on the existing pension products (76%), only half of them actively participated in the schemes. Finally, the study found out that financial literacy had a significant positive relationship on pension preparedness. The study recommends that the government, RBA and NSSF undertake extensive education campaign to educate informal sector workers on the importance of membership to retirement benefit/pension schemes as a means to secure old age. The study further recommends necessary policy and institutional reforms to make access to retirement pension services easily accessible to informal sector workers.

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ABBREVIATIONS

ANOVA – Analysis of Variance
DFID- Department of International Development
EPS- Social Protection Survey (*Encuesta de Prevision Social*)
FSD- Financial Sector Deepening
GDP- Gross Domestic Product
HRS- Health and Retirement Studies
ILO- International Labor Organization
IPP- Individual Pension Plans
IRA- Individual Retirement Account
IRBS- Individual Retirement Benefits Schemes
ISSA- International Social Security Association
KRA- Kenya Revenue Authority
MSMEs- Medium and Small Micro Enterprises
NSSF- National Social Security Fund
OECD- Organization for Economic Cooperation and Development
PAYE- Pay As You Earn
RBA- Retirement Benefits Authority
SPSS- Statistical Package for Social Sciences
SSA- Social and Security Administration
TDA- Tax Deferred Accounts
UK- United Kingdom
US- United States of America

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Saving for old age is one of the most important decisions individuals have to make over their lifespan. However, it is not very easy to do so when individuals are not fully informed on how to go about it. For those who are formally employed, this culture becomes easy as most employers provide avenues for them to save within the benefits package of employment. For the informal sector however, this becomes difficult since most of the members are self-employed and accessing such ‘privileges’ is happens rarely. One of the ways to equip such individuals is through adequate financial literacy that will enable them make such critical decisions independently. It has been found that financial literacy helps individuals plan for their retirement adequately but efforts to test this in the informal sector has been rare.

1.1.1 Retirement Planning and Preparedness

Everyone dreams of a retirement life with lots of financial security, relaxation, peace of mind and a good playtime with grandchildren. But this dream can become a reality only if one has saved enough during their active (younger) working life; it takes good planning and careful evaluation of one’s position at every stage. Thinking about retirement in advance can help in understanding the retirement process and in gaining a sense of control over the future (Kapoor, Dlabay, & Hughes, 1994). Retirement planning has been defined by Magera (1999) as a systematic way of setting aside resources (funds), business project and time for the purpose of providing income in the old age. The goal of social protection is not mere survival, but social inclusion and preservation of human dignity (Keizi, 2006)

Most of the people who have retired now did not have the opportunity to save enough for their old age due to fewer financial instruments available to them. Most people started engaging in business while they were just about to retire or when they have retired (Keizi, 2006). Most of these ventures usually do not survive and it means that the little hard-

earned retirement savings go down the drain. It is vital to engage in basic retirement planning activities throughout one's working years and to update retirement plans periodically. Though it is never too late to begin sound financial planning, one can avoid the unnecessary difficulties by starting to plan early. Saving now for the future requires tackling the trade-off between spending and saving (Kapoor et al, 1994).

1.1.2 Financial Literacy

Pension finance literacy enables individuals to plan for retirement, make proper choices on pension products and contribute effectively in management of their pension schemes (Njuguna & Otsola, 2011). It also influences the saving behavior and member participation in pension schemes of individuals and in turn contributes to economic growth of countries (Agnew, Szykman, Utkus & Young, 2007).

Worthington (2005) defined financial literacy as the ability to make informed judgments and to take effective decisions regarding the use of management and money. Remund (2010) on the other hand defines it as a measure of understanding key financial concepts. (Lusardi & Mitchell, 2013) further defined financial literacy as peoples' ability to process economic information and make informed decisions about financial planning, wealth accumulation, pensions, and debt. These authors suggest that a financial literate population is able to make informed decisions and take appropriate actions in matters affecting their financial wealth and wellbeing. OECD (2005) also gave a comprehensive definition of 'financial education' as:

the process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.

1.1.3 Relationship between Financial Literacy and Pension Preparedness

The relationship between financial literacy and pension preparedness was first found by Lusardi and Mitchel (2006). These researchers devised and fielded a purpose-built module on planning and financial literacy for the 2004 Health and Retirement Study

(HRS) in the US. The module measured how workers made their saving decisions, how they collected the information for making these decisions, and whether they possessed the financial literacy needed to make these decisions. The researchers found that those who displayed financial knowledge were more likely to plan and to succeed in their planning. Moreover, those who did plan were more likely to rely on formal methods such as retirement calculators, retirement seminars, and financial experts, and less likely to rely on family/relatives or co-workers. Most importantly, those who display higher financial literacy are more likely to save and invest in complex assets, such as stocks. The findings in this study opened the avenue for similar studies globally, with the overall goal of improving pension savings among members.

Financial market advancements of the 21 Century have forced the global financial sector to transfer substantial risks to households, making individuals bear the responsibility to manage their own financial and pension risks. This has brought about complicated financial products, more flexible regulation and minimal financial disclosures (Messy, 2009), exposing individuals not only to great opportunities to maximize wealth but also more potential to make wrong financial decisions. To be able to mitigate financial risks and seize opportunities in the complex financial markets, consumers need to be very financially literate. People with lower levels of pension finance literacy rely on employers, co-workers and friends as opposed to cost fundamentals when choosing pension funds (Hastings, Mitchell & Chyn, 2011)

Pension literacy varies both according to socio-demographic group and according to the knowledge being tested. Those who know more about their pension stand to gain the most. People gain pension literacy as that knowledge becomes more useful (Skog, 2006). Financial literacy requirements change over the life time of an individual in response to the changing financial needs and is therefore important in the private pension's field due to the unique nature of the financial products supplied which are complex, long-term and have wider social coverage (OECD, 2008). For instance, according to (Arnone, 2004), older individuals are likely to be more knowledgeable on pension finance matters since retirement planning programs are limited to those who are about to retire where the goal

of this pre-retirement planning program is to help participants identify their basic retirement decisions and start preparing for retirement. Additionally, retirement savings increases with age, which creates consciousness amongst the population as they grow older suggesting that they will seek more of pension finance knowledge. Arnone (2004) further implies that distinct variables like education level, gender, job experience, management level, income and marital status influences a person's knowledge on pension finance matters.

Access to financial education programs form a large barrier to improving people's knowledge of the pension systems and how it affects them (Worthington, 2005; Skog, 2006; Tippet & Kluvers, 2007; James, 2009). For those who are formally employed, they rely on accurate knowledge regarding their likely retirement benefits and consumption needs in order to arrive at the optimal savings decisions. The universal assumption is that workers are perfectly informed about the rules and regulations governing their employer- and government- provided schemes. However, to the limited extent that researchers have been able to test this assumption, results suggest that workers are less than fully informed (Bernheim, 1988; Mitchell, 1988) and that providing information can affect their behavior (Clark & Schieber, 1996; Bayer, Bernheim & Scholz, 1996; Bernheim & Garrett, 1996; Madrian & Shea, 2000). The lack of key financial information has also been found to cause people to prepare inadequately for retirement, including saving too little and retiring too early (Lusardi & Mitchell, 2006).

Financial knowledge is directly correlated with self-beneficial financial behavior (Kefela, 2010), and therefore financial education should take a wholesome perspective to include the fundamentals of finance since without understanding the basic finance principles, pension education would be ineffective. Kefela (2010) further notes that participants who are less financially literate are more likely to have problems with debt, are less likely to save, are more likely to engage in high cost mortgages and are less likely to save for retirement and by extension are less likely to make better choices for their pension schemes.

In both developed and developing countries, many individuals do not know where to get trustworthy and impartial advice about pension and financial issues. For instance, in the United States of America, where households have a wide array of financial products, low level of financial literacy prevents consumers from making good decisions on financial products (Lusardi & Mitchell, 2006; OECD, 2008; James, 2009; Lusardi et al, 2010). In Chile, a country whose pension system has served as a model for many pension reformers around the world because of the perceived success of its system of individual accounts (Mitchell & Barreto, 1997), the most important concern that voiced had to do with the relatively low levels of awareness that workers have regarding the system (Skog, 2006). Financial literacy levels in developing countries are quite low with DFID (2008) showing that only half of the adult population knew how to use basic financial products. The same study found that in seven African countries only 29% of adults had a bank account and that approximately 50% used no financial product whatsoever, not even informal financial products. In Kenya, FSD (2009) reported that 59.5% of the population was excluded from the use of formal financial services. The same study notes that the exclusion decreases as the level of education increases from 55.9% with no education to 8% for those with tertiary education.

Evidence on financial literacy from the US, confirm that actual financial knowledge was deficient for both high school students and working-age adults (Lusardi et al, 2006). These results were from a study conducted by the National Council on Economic Education (NCEE) by Harris Interactive in 2005. This survey consisted a 24-item questionnaire on topics grouped in categories “Economics and the Consumer”, “Money, Interest Rates and Inflation”, and “Personal Finance”. When the results were tallied using a standard grading criterion, adults had an average score of C while the high school population performed worse attaining a grade of F (average score of 53%). Low levels were also confirmed by another related study by the JumpStart Coalition for Personal Financial Literacy focusing on US high school students (Mandel, 2004). This study showed that the students performed poorly on credit management and personal finance questions, and also knew little about stocks, bonds, and other investments in 2004 and 2006.

Studies in the UK (Miles, 2004), showed that UK borrowers had a weak understanding of mortgages and interest rates. In a survey conducted on younger people by the UK Financial Services Authority, found out that those in low social classes and those with low incomes, were least sophisticated financial consumers. Respondents in several European nations scored low on financial numeracy and literacy scales (Christelis, Jappelli, & Padula, 2005)

Further studies in Japan (OECD, 2005) showed that 71% of adults' respondents knew little about equity and bond investments, and more than 50 lacked any knowledge of financial products. A study done in Korea in a youth survey in 2000 conducted by the Jump\$tart coalition showed that the young Koreans fared no better than their American counterparts when tested on economics and financial knowledge, with most receiving a fail grade.

A Kenyan study on pension literacy (Njuguna & Otsola, 2011) also found low levels of financial literacy among Kenyans in the Occupational Pension Schemes. The researchers customized the questions in Lusardi et al (2006) to fit the local situation. The overall pension literacy rate among respondents was found to be at 53.7% and considering that the respondents were drawn from the formal sector and most of them being the trustees of the pension funds, it points that the overall literacy would be shockingly lower were it to consider those in the informal sector.

Out of these findings, most governments have designed financial literacy programs with the hope of equipping the population with the right skills to influence positive saving culture. As noted by Lusardi et al (2005), there needs to be various training programs to the various groups of savers since a "one-size-fits-all" education program will do little to stimulate saving and could even be a disincentive to participate in a financial literacy effort.

1.1.4 The Informal ‘Sector’ in Kenya

The term ‘informal sector’ was popularized by a study (ILO, 1972) but Kenyans have another term for the sector namely ‘Jua Kali’, which literally means ‘under the hot sun’ (Orwa, 2007). It is indicative of the severe conditions under which micro enterprises and their employees labor. According to Orwa (2007), this sector has emerged as a result of the incapacity of the formal, regulated industries to absorb new entrants. The ‘Jua Kali’ sector encompasses small-scale entrepreneurs and workers who lack access to credit, property rights, training, and good working conditions. Originally restricted to artisans, the term has come to include a number of professions, including auto mechanics and market vendors. They supply goods to local markets using predominantly manual labor and little capital, often making to with handmade tools.

Globally, the informal sector plays a very critical role as it creates jobs, boosts entrepreneurial activity, minimizes unemployment and underemployment, alleviates poverty and contributes to economic growth (World Bank, 2006). In Kenya, the sector has grown progressively from 4.2% of the total employment in 1972, 10.3% in 1980, 15.2% in 1985, 39.1% in 1990, 53.4% in 1994 (Ikiara & Ndun'gu, 1999) and 80% in 2011 (Economic Review, 2011).

The informal sector is generally viewed as comprising of activities of petty traders operating in the streets of main urban centers. Most are involved in the sale of second-hand items like clothes, some in the business of shoe shining, street vendors, carpentry, vegetable selling, repair and construction work. It can also be described as any activity generating income and profits, though on a small scale, using simple skills, dynamic and not tied to regulation of the activities. Typically, the informal sector comprises economic activities not regulated by laws such as environmental, labor or taxation, but is subject to the regulations of the local authorities for orderly business operation, and generally not monitored for inclusion in the Gross Domestic Product (GDP) of Nations.

Social security coverage to the informal sector workers is still very low and a lot of efforts need to be made to educate the informal sector workers on the importance and

means of saving for retirement (Keizi, 2006). Keizi further suggested that education and incentives could help encourage informal sector members to become members of a scheme relevant to the informal sector. A key policy issue in developing countries like Kenya is how to get participants in the informal sector to save and plan for retirement. According to Keizi, over 90% of the Population in Sub Saharan Africa and South Asia are not covered by any pension arrangement due to general unemployment, low incomes, poor saving culture and above all pension arrangements that only favor workers in the formal sector.

In Kenya, among the pension schemes available, NSSF is thought to be a bit easier to be accessed but the informal sector workers since the minimum amount required for contribution is affordable to most people (RBA, 2007). Individual schemes are said to be too complex, whilst the information supplied about them is usually too opaque and cannot easily be understood by the workers in the sector (Nyakundi, 2009). In addition, the level of financial literacy is widely accepted to be too low to enable the informal sector employees to analyze the requisite data, even if these data were presented more transparently. As noted in Njuguna (2012) informal sector workers are myopic, and have very high discount rates, so that pension saving is given low priority. For all these reasons, individuals in the informal sector are left to choose on their own, are likely to save adequately or inappropriately, through risky investment products.

In trying to ensure more informal sector workers have an avenue to save for retirement, the Retirements Benefits Authority started the ‘Mbao’ Pension Plan designed specifically for the informal sector (Njuguna, 2012). In this scheme, members would contribute Kshs 20 daily towards their pension. For a consistent contributor in a month, this would translate to at least Kshs 600, which is three times higher than what one would have contributed through NSSF. An increased effort in financial literacy of the sector members is expected to widen the coverage of members in this very important sector.

1.2 Research Problem

The informal sector plays a key role in the economy by employing about 80% of Kenyans, yet it is a sector that has had the lowest pension coverage. The conventional pension schemes like the NSSF have not been able to attract these huge numbers and this leaves most of these Kenyans with few avenues for pension saving. There is an increasing realization among policy makers to shift focus on this sector which shows a great potential but meaningful effort is yet to be seen. Previous financial literacy studies have been done in the formal sector with little on the informal sector. Studies in the formal sector have shown that those who are financially literate are able to prepare adequately for retirement. This has been lacking in the informal sector and thus this study will attempt to bridge the gap by assessing the financial literacy levels in the sector, find the level of participation and awareness on formal pension schemes and attempt to find if there exists a strong relationship between financial literacy and pension preparedness.

Studies done locally on pension issues have been few with most of them touching on the overall reform issue and the general review of the pension system in Kenya. In Raichura (2008), the study tried to take stock and assessed the reform initiatives that had been initiated in the decade immediately preceding the study to assess the results achieved. The main purposes of the paper was to present an analysis of the Kenya pension system, identify key areas of weaknesses of the system and to suggest further strategies that may enable the objectives of a broader pension reform to be met. This study provided rich literature in the pension studies in Kenya and made very good recommendations in taking the pension system a step further. The study did not however cover areas relating to the savers' financial literacy levels and how it affects their pension 'buying' decisions.

In yet another study (Nyakundi, 2009), the researcher provided key legal and policy framework required to enhance the pension coverage in Kenya. The researcher clearly pointed out how weakness in the current legal framework excluded most Kenyans from pension coverage and how the current NSSF Act has been discriminative in terms of coverage especially for those in the informal sector and even for some in the formal sectors especially the lower cadre staff in the civil service. One of the key

recommendations by the researcher was the removal of all discriminatory provisions and the creation of pension provision as a term of employment for all employers.

In Njuguna & Otsola (2011), the researchers sought to determine the pension finance literacy levels and the variables that influence it amongst members of occupational retirement schemes in Kenya. The study consisted of 2395 (response rate 65%) individuals drawn from 648 occupational retirement schemes. A binary measure of pension finance literacy was conducted and one way ANOVA and post hoc tests using Tukey approach were conducted to determine the bases on which pension literacy differ. The study found that pension finance literacy differs significantly on the basis of age, education level, gender, job experience, management level, income, pension plan design, participation in previous pension finance literacy programs, area of specialization and membership in a pension plan board but does not differ on the basis of marital status of individuals. Despite the enormous contribution to the literature in financial and pension literacy in Kenya, the study failed to extend further to show if pension literacy improved pension saving behavior. In addition, the study covered the formal sector only and did not cover the informal sector, which is arguably bigger than the formal sector. As such, the findings cannot be generalized for all sectors.

In Gitari (2012) the researcher expanded the study done by Njuguna and Otsola (2011) to find the relationship between financial literacy and retirement planning. The study focused on the 787 registered pension schemes in Nairobi. With a sample of 158 individuals drawn from the pension schemes, and using multiple regression on five variables namely financial literacy, age, income, marital status and education level against the dependent variable, retirement planning. The researcher found out that financial literacy, income and the respondents' level of education were strongly and positively associated with retirement planning and statistically significant at conventional levels (P value less than 0.05). Interestingly, age and marital status were found to be statistically insignificant to retirement planning. Despite the enormous contribution to literature this study made, it again did not include the informal sector.

In expanding the literature available locally on pension finance literacy, this study seeks to find if pension finance literacy has an impact on saving behavior and further pension preparedness on the informal sector in Kenya. The study will first begin to find out if people in the informal sector save for retirement and will further explore the channels of their retirement savings. The study will also assess the level of pension finance literacy with a view to finally find the impact the level of literacy and the other variables in the Gitari study have on retirement preparedness.

1.3 Objectives of the Study

This study seeks to achieve three objectives.

1. To find the level of awareness and participation on the existing pension schemes by the informal sector
2. To assess the level of financial literacy among the informal sector workers
3. To find the relationship between financial literacy and pension preparedness (planning) among the informal sector workers.

1.4 Significance of the Study

There are many parties that will benefit from the findings of this study. To begin with, this study is expected to give individuals insight in to the importance of financial literacy in retirement planning. These include financial management practices such as saving, budgeting, cash flow management credit management and asset accumulation. This will help them adequately prepare for their retirement and will reduce their old age financial stress

To the regulatory authorities (RBA) and the pension schemes, the findings on the literacy levels will help them evaluate the effectiveness of their education campaigns on savers. Of great importance, the study will help regulators design more appropriate programs to reach the informal sector which employs the majority of Kenyans. On whether awareness improves pension savings behavior, the regulatory authorities may have information to

help them suggest appropriate incentives/policies that will bring the desired effect on pensions. The Ministry of Education will also gain insight on the need of making financial education a part of the school curriculum to enable Kenyans acquire critical information at a younger age that will go a long way in helping them adequately prepare for retirement irrespective of the sector they will choose to engage their future life in.

To academicians, the study will contribute to the existing body of knowledge on financial literacy in the informal sector in Kenya, which has been largely absent. It will also stimulate prospective researchers to replicate the study to other sectors of the economy and in other regions of the country. The study will open avenues for further studies in the usually ignored informal sector.

Finally to the employers, the study will help them realize the importance of introducing financial literacy programs and the design appropriate education and awareness programs to their employees to improve their welfare. This will in turn help their employee boost their morale and eventually work performance.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter reviews the main theories guiding the study and a few empirical studies done worldwide. It also provides an overview of the pension schemes in Kenya and finally shows how the tax law applies the pension incentives to reduce taxable income on an individual's income.

2.2 Theoretical Review

2.2.1 The Life Cycle Hypothesis

This theory deals with economic decisions on retirement saving in the rationalization of an individual's income in order to maximize utility over his lifetime. Initially developed by Ando and Modigliani (1963), it was based on the conventional economic approach to saving and consumption which assumes that a fully rational and well-informed individual will consume less than his income in times of high earnings (during employment), and will save to support consumption when income falls (after retirement). This type of saving behavior enables households to smooth their marginal utility of consumption over their life cycle. This model assumes the following of the human behavior: that they are forward-looking over their lifespans; they can predict the financial resources they will have over their lifetime; they understand something about the financial resources they will need in all periods of their lives; and they make informed decisions about the use of their financial resources.

2.2.2 The Expectancy Theory of Motivation

Motivation has long been recognized as a key driver of individual behavior. Starting as early as Tolman (1932) and Lewin (1938), expectancy theory ties perception to behavior. Since then, extensive academic research has been focused on developing the understanding of motivation. Further work by Vroom (1964) on the force model and Samuelson (1967) on the utility model provides a theoretical grounding for explaining the

motivational influences underlying human behavior as a function of expectancy, instrumentality, and valence or utility.

Expectancy relates to the expectation or likelihood that specific actions will yield a certain outcome, meaning that performance is based on effort. Instrumentality relates to the relation between performance and reward, meaning that outcome is based on performance. Valence and/or utility relates to the value of importance the individual places on the perceived outcome. Based on these theories, individuals are motivated by things that can successfully lead to valued outcomes (Mandel & Klein, 2007)

Financial literacy imparts individuals with the skills and knowledge to help them make key decisions that affect their lives. Having enough pension savings to meet retirement needs is one of the most important outcomes that an individual would like to achieve. According to this theory therefore, the impact of financial literacy programs depend on the expectations individuals have on the program and the expected reward of the outcome (Mandel et al, 2007). This means that if individuals perceive financial literacy to lead to making them make better decisions, they would be motivated to partake of them and this improves on their long term perceived outcome (enough pension savings).

2.2.3 The Goal Setting Theory of Motivation

More recently, expectancy theory has been integrated with goal setting theory (Hollenbeck & Klein, 1987). Goal setting theory is grounded in the belief that conscious goals and intentions drive results. Based on the goal setting theory of motivation, Locke (1986) and Locke and Latham (1990) find that individual goals are likely to determine how well they perform to related tasks. Specifically, clearly defined and more challenging goals yield higher performance than vague, easy or do-your-best goals. To be effective, goal setting theory assumes that individuals must be committed to the goal, must get feedback and must have the ability to perform the task. This means that financial

literacy programs should be more effective when they are motivated by perceptions and concerns about financial well-being later in life.

Motivational theory suggests that measures of financial literacy should be related to financial behavior that is in the consumers' best interests. Hilgert, Hogarth and Beverly (2003) formed a "Financial Practices Index" based upon (self-benefiting) behavior in cash flow management, credit management, saving and investment practices. When they compared the results of this index with scores on financial literacy quiz, they found a positive correlation between financial literacy scores and Financial Practices Index Scores. Their results suggest that financial knowledge is related to financial practices.

2.3 Empirical Literature Review

There have been several studies to assess the level of financial and pension literacy on workers. One such study was by Gustman and Steinmeier (2001) who provided a comprehensive analysis of what workers (don't) know about their pensions and social security. This was done at a time when the United States Social and Security Administration (SSA) began emailing workers statements of their accrued and projected pension benefits in a view to improve retirement planning knowledge. Their analysis used information from the Health and Retirement Study, which surveyed 7,607 households (or 12,652 individuals) in 1992 and re-interviewed them every two years through 1998. The Health and Retirement Study (HRS) is a longitudinal, nationally representative study of older Americans with the members born from 1931 to 1941. The paper focused on differences between respondents' reported values, and values obtained from linked records provided by the Social Security Administration, or detailed pension plan descriptions obtained from firms, emphasizing the distribution of differences at the level of an individual. The paper also analyzed whether the differences between the observations that have linked administrative social security and pension records available and those that do not, are related to demographic and other measures.

The analysis showed that the respondents' reports of social security and pension values and characteristics differed extensively from the comparable information contained in the

linked data provided either by SSA or employers. Respondent reports misstate the wealth older individuals will have in retirement, and the budget sets that eventually will govern their decision to retire. Although some of the errors were random, respondents were on the whole pessimistic. The findings suggest that there is much more work to be done before evaluating current programs and policies designed to increase the information of those planning for retirement. Additionally, there was little information on the effectiveness of recent government efforts to educate workers about their pensions and social security. Employer financial education seemed to be helpful. However, there was not enough systematic information about what causes the misinformation to have confidence in what types of education programs might be helpful.

Duflo and Saez (2003) carried out a randomized experiment to shed light on the role of information and social interactions in employees' decisions to enroll in a Tax Deferred Account (TDA) retirement plan within a large university. A Tax Deferred Account plan is one where employees choose whether to participate and how much to save for their retirement- a voluntary plan. In each year, the university organizes a benefits fair and invites all of its employees to the fair in order to provide information on benefits, with a stated goal of increasing the enrollment rate in TDA which was very low (35%). The university would usually send invitation letters to all employees, held in two consecutive days in November. The population of the study was 12,500 employees, but the study focused on faculty employees only accounting for three quarters of the population. The study selected a random sample of employees not yet enrolled in the TDA and sent them invitation letters promising a \$20 reward for attending the fair. They also designed the experiment in such a way that they were able to estimate the social interaction effects. 'Treated' individuals who were sent the invitation letter were selected only within a random subset of departments (the treated departments).

The first stage of the study analyzed the effect of the invitation letter on fair attendance. Treated individuals were more than five times likely to attend the fair as control individuals. Interestingly, non- treated individuals in treated departments were three times as likely to attend the fair as control individuals in non-treated departments, despite the

fact that only original letter recipient could claim \$20 reward. This showed that the invitation letters not only increased the fair attendance rate for individuals who received them but also had a spillover social effect on their colleagues within departments (Duflo et al, 2003). The second stage of the study tried to estimate the causal effect of fair attendance and social effects on decision to enroll in the TDA. The study showed that five and eleven months after the fair, individuals in treated departments were significantly more likely to have started contributing to the TDA than controlled individuals. This showed that the experiment, and hence the fair, was successful in increasing the TDA enrollment. However, there was no significant difference in TDA enrollment between those who actually received the encouragement letter and those in the same departments who did not. The study showed that small incentives had successfully induced treated employees as well as members of their peer groups to attend the fair, and eventually enrolling in the pension scheme.

In Skog (2006), the researcher examined what affiliates of the Chilean pension system knew about their pension system and whether they responded to incentives to learn more about their benefits depending on whether they stood to gain most from a particular aspect of the pension system. The researcher relied on a new microeconomic data set from Chile known as the EPS survey conducted by the University of Chile and the University of Pennsylvania in 2004. The data contained socioeconomic characteristics such as family and work history, pension knowledge as well as wealth and health status. The sample was limited to ages 18 and 60 and offered the opportunity to determine how financial knowledge changes over the life cycle as well as across individual circumstances. Using the EPS survey, the researcher created a series of categorical variables to measure aspects of retirement system literacy in the Chilean context. These categories were: knowledge regarding system inputs; knowledge of pension investments; knowledge of expected benefits from the pension system and knowledge of safety- net components.

The findings from this study indicated that older, healthier, more highly paid and more educated men, display more pension literacy across the board. In addition, people appear

more likely to inform themselves as knowledge becomes more relevant, which implies that they respond to incentives when investing in self- education. The study found that measures of knowledge may not be the best way to determine which groups to target for educational efforts. Finally, it was found that workers with a labor contract and who are union members have significantly more knowledge, as do those employed in larger firms, verifying the importance of informal systems in determining knowledge.

Locally, Njuguna and Otsola (2011) sought to assess the levels of financial and pension literacy, determine the financial literacy needs in a view to recommend the strategies that can be put in place to enhance pension literacy. They used a sample of 2,395 employees drawn from the members of 1308 occupational pension schemes in Kenya in the Retirement Benefits Authority register on 31 May 2010. The sample was drawn from all the provinces in Kenya with a condition to include at least 40% of the pension schemes in each province. The participating members were randomly selected at the data collection stage with a condition to include at least one trustee (member of the pension scheme's board) from each scheme. The data was collected between 19 August and 31 October 2010 with the eventual sample comprising 1554 members with a response rate of 65%. Self-constructed instruments were used to determine financial literacy levels and needs, barriers to participation in pension scheme matters, challenges to participation in finance and pension literacy programs and the possible strategies to enhance participation in finance and pension literacy programs.

The study found out an overall of 39.5% had participated in a finance or pension training much of which had been offered by RBA, and most of them had attended the training once. An overall of 45.3% of the respondents were in the low literacy group and demonstrated a strong understanding of pension scheme issues as opposed to financial issues. The literacy levels did not differ significantly between those with primary education and secondary education. However, this literacy level between the primary and secondary school levels on one hand differed significantly with those with college and university education on the other hand. The study further concluded that despite the above average literacy level among Kenyans; effort should be done to increase their

participation in the management of their pension schemes. Additionally, the Kenya government needs to put in place a national financial and pension literacy strategy and partner with other institutions to ensure appropriate finance and pension literacy programs are available in the market.

In a study targeting the informal sector, Njuguna (2012) carried out an exploratory study to find the critical success factors for a micro pension scheme. The researcher evaluated a model of a pension scheme that would be ideal for the informal sector in Kenya from the theoretical justification for micro pension schemes and the consequent economic stability of the schemes. The study established the features of a micro pension scheme to cover the informal sector workers and provided recommendations on the steps that could be taken to address the challenges to the implementation of such a system in Kenya.

The study adopted a variety of questions to answer the key research questions. An exploratory study was undertaken in two phases to discern the key issues through first focused group interviews and later through a questionnaire that was administered to a wider group of respondents. This study focused on the informal sector workers drawn from the Kenya National Jua Kali Cooperative Society and micro finance institutions. Each of these two groups had different types of questionnaires administered to them to come up with a model. A key findings of the study was that a majority (85.3%) of the respondents were willing to join a government supported pension plan, and a majority of these (55%) indicated that they would prefer to save more than three times in a month.

Findings of the study led to the conceptualization of three models for implementation of a micro pension. The models are centralized nation-wide scheme, public private partnerships and multi- employer models. In the centralized model, it is intended to serve all the informal sector workers with or without branches. The scheme is operated by the government on behalf of the members with the establishment on a defined contribution basis, presence of a custodian, administrator and fund manager who runs the scheme, rules of admission, withdrawals and separations enabled in regulation to be enforced by

the government. A scheme that operates in such a model is the ‘Mbao’ Pension Plan which is still gaining popularity among the informal sector workers. This study went on further to suggest the other schemes, the envisaged challenges and how to counter them. This study contributed immensely on the informal sector pension literature.

In Gitari (2012), the researcher expanded the study done by Njuguna and Otsola (2011) to find the relationship between financial literacy and retirement planning. The study focused on the 787 registered pension schemes in Nairobi. With a sample of 158 individuals drawn from the pension schemes, and using multiple regression on five variables namely financial literacy, age, income, marital status and education level against the dependent variable, retirement planning. The researcher found out that financial literacy, income and the respondents’ level of education were strongly and positively associated with retirement planning and statistically significant at conventional levels (P value less than 0.05). Interestingly, age and marital status were found to be statistically insignificant to retirement planning. Despite the enormous contribution to literature this study made, it again did not include the informal sector.

2.4 Pension Schemes in Kenya

The pension schemes in Kenya can be categorized into four main groups as in the next section and are regulated by the Retirements Benefit Authority except the pension scheme for civil servants (Nyakundi, 2009).

2.4.1 National Social Security Fund

The National Social Security Fund (NSSF) is a creation of parliament through section 3 of the National Social Security Fund Act (Cap 258). The NSSF covers formal sector employees in Kenya other than employees covered under the public service pension scheme. All employers are required to register with the NSSF but only employers with five or more employees are required to contribute to the NSSF (Nyakundi, 2009). There is a revised NSSF bill 2012 awaiting the President’s assent which has far reaching recommendations that are an improvement from the old Act. The NSSF covers about

53% of formal sector employees in Kenya and 11.4% of total recorded employment (RBA, 2008). The percentage of the formal sector employees excluding public service employees covered by the NSSF though is almost 70% (Nyakundi, 2009)

2.4.2 Voluntary Occupational Schemes

Voluntary occupational schemes are schemes set up by employers for the benefit of their staff. Such schemes are voluntary and are established under trust. The total number of occupational schemes is currently indicated at 1003 of which 10.4% are defined benefit schemes and 89.6% are defined contribution schemes. The total contributing membership of occupational schemes is estimated at about 298,742 (or 16% of formal sector employment) all of whom are also required to be members of the NSSF and make statutory contributions to the NSSF (RBA, 2009).

2.4.3 Individual Retirement Benefit Schemes

Individual Retirement Benefits schemes (IRBS) are recognized independent legal entities established for the sole purpose of operating a retirement savings fund. IRBS are open to the general public regardless of employment or income affiliations and have a wide geographical branch network for easy accessibility. IRBS are however most convenient for all those willing to save for their retirement and have limited access to any other scheme. These include, workers in companies where the employer fail to set up an occupational scheme; very small companies where setting up an occupational scheme is not viable; self-employed professionals including lawyers, architects, doctors and accountants; business people and the informal sector; and, anyone who needs to make additional savings for their retirement. The total number of members is a dismal 8,800 individuals, 70 percent of who are company employed (RBA, 2007).

2.4.4 Civil Service Pension Scheme

The provision of pension to civil servants in Kenya is a constitutional requirement whose detail and administration is left to the various parliamentary enactments. The constitutional provision does not discriminate on the coverage of the public officers in the civil service pension scheme. The main group of persons to whom the Pensions Act does

not apply includes employees on non-pensionable contract terms or employees in government institution declared as public service but covered by their own separate pension schemes (Nyakundi, 2009)

2.5 The ‘Mbao’ Pension Scheme

For a long time, the informal sector in the country had remained unreached. With only 15% of the total workforce covered by a registered retirement plan (Nyakundi, 2009), the RBA and the National Federation of Jua Kali Associations consequently collaborated to establish a suitable retirement benefit scheme that would cater for people in the informal sector (ISSA, 2011). The ‘Mbao’ pension plan was officially launched on 28th June 2011 for the Medium and Small Micro Enterprises (MSMEs) sector and to help members of the Jua Kali Associations to save regularly to provide a long-term and reliable income when they retire from their jobs or business. The name ‘Mbao’ refers to the amount- 20 Kenyan Shillings (KES) - which is the minimum daily contribution that members can make (RBA, 2011).

2.6 Conclusion

Saving for old age is very important as it assures one of their financial securities at old age, irrespective of sector that a person works in. However due to illiteracy in pension issues, most people will not be able to make the right decisions. Without effective education programs directed to potential savers, the policies would just remain as “good gestures” and may not serve the purpose they were intended for. To be able to design these education/literacy programs, the education needs of the savers should be identified first so that this informs the programs. This should be an on-going process that should be done in an organized manner to achieve the best results. There is no single educational program for all people, but well-designed programs for specific needs can bring out the best impact to encourage members to save.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter contains the research methodology followed in the execution of the research work, which entails the research design, population intent for the study, the sample size, data collection method, data analysis and reliability and validity.

3.2 Research Design

This was a descriptive quantitative study aimed at determining the relationship between financial literacy and retirement planning. According to Cooper and Schindler (2003), a descriptive study is concerned with finding out who, what, where, and how of a phenomenon.

3.3 Population of the Study

The target population of the study consisted of the Kenyan informal workers operating in the busy markets in Kenya. The sampling frame was the informal sector markets spread throughout Kenya. The study was conducted in August and September of 2013.

3.4 Sample Design and Size

As proposed by Roscoe (1975), a sample size of 30 to 500 is appropriate for most researches. Due to the logistical challenges and budget constraints, purposive sampling was used to select Nairobi among the other provinces/counties as it was closest and the fact that it is the headquarters of Kenya, with most of the informal businesses. Random sampling was used to select respondents from five of the busy markets in Nairobi. Stratified random sampling was then used to select 30 traders in each of the selected markets from Nairobi. In each market, five informal sector traders were randomly selected from small scale trader categories namely second hand clothes dealers, small

shops and Kiosks, Jua Kali Artisans, hawkers, fruits and vegetable vendors and food processing kiosks. This led to a sample size of 150 informal sector workers.

3.5 Data Collection

The study used primary data since it provided relevant and current data in the subject of study. A questionnaire was used to collect the data. It contained both open and closed questions. Due to the busy nature of the respondents in the targeted sample, the questionnaires were filled immediately as they were administered.

3.6 Data Analysis

The dependent variable (retirement preparedness) was measured as a categorical variable taking values from 0 if the respondent was not prepared to 5 if the respondent was fully prepared.

The independent variables included demographic characteristics like age, years of formal schooling, marital status and financial literacy. Social economic variables like income were also included as predictors. Financial literacy was measured using 8 questions on a 5-point Likert scale of between 0 if not literate and 4 if very literate, to assess the degree to which they understood and practiced various financial concepts. The average score for the eight questions was used as a measure of the financial literacy level of each respondent.

Income was measured by the monthly income for the individuals, age by the current age from birth, while education was measured by the highest level of education attained.

The study used multivariate logit (mlogit) regression to examine the relationship between retirement planning, financial literacy and socio economic characteristics from the samples and to explore the personal financial wealth profile, based on the respondents' demographic characteristics. In this study, retirement preparedness was regressed against five independent variables: financial literacy, age, income, marital status and highest education level.

The regression equation used for this study was

$$R_p = \alpha + \alpha (\text{FL}) + \alpha (\text{age}) + \alpha (\text{income}) + \alpha (\text{marital status}) + \alpha (\text{education level}) + \epsilon_{ij}$$

Where

ϵ_{ij} is the error term

R_p is the dependent variable indicating retirement preparedness

FL is an independent variable indicating financial literacy

Age, income, marital status, and education levels were independent control variables

Data was analyzed using SPSS Version 20. To validate the relationship, the t-test was used to determine the significance level based on the parameters at 5% level of confidence.

3.7 Data Validity and Reliability

Mugenda and Mugenda (2003) asserted that, the accuracy of data largely depended on the data collection instruments in terms of validity and reliability. Validity as noted by Robinson (2002) is the degree to which results obtained from the analysis of the data actually presents the phenomenon under study. The validity of the data was ensured by having objective data. This was achieved by pre-testing the questionnaires to a sample of respondents on the information to be collected to determine the accuracy of the instrument. Reliability on the other hand refers to a measure of the degree to which research instruments yield consistent results (Mugenda et al, 2003). In this study, reliability was ensured by pre testing the data with a selected sample of five respondents.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter begins by presenting the key data of the survey from the respondents. It then summarizes and interprets the key findings of the study and compares the major findings with findings in other studies in the area of interest.

4.2 Data Presentation

4.2.1 Demographic characteristics of the sample

The study covered a total of 150 respondents with a majority of them (64.7%) being male. Most of the respondents were relatively young with 83.3% being 40 years and below, a majority of them (63.7%) were married. A significant number of the respondents (75.4%) had attained up to secondary school level with only 4% being University graduates. Most of the respondents (81.3%) were owners of the businesses and 68% of the businesses had the monthly income being below Kshs 12,000 per month. the complete summary of the demographic characteristics is found as Ttable 1 in the appendix.

4.2.2 Retirement Saving of the Informal Sector

The informal sector considers saving for retirement very important. For most of them, there is no specific retirement age- most of them considered retirement as the stage where one is not able to continue with the business either due to old age or deterioration in health. The respondents use a mix of ‘vehicles’ for saving for their retirement, with 31.6% saving for retirement through cash savings with banks. The general level of saving in the formal pension schemes (NSSF and Mbao Pension) recorded at 36.8% while 7.2% of the respondents do not save for any form of retirement as shown in table 2 in the

appendix. Other forms of savings include investment in shares, investment in real estate, and investment in the education of their children.

4.2.3 Awareness and participation on existing Pension Schemes

The overall awareness level of the respondents on the existing pension products was 89% with 11% not aware of any pension scheme. A majority of the respondents were aware of NSSF (76.5%) followed by Mbao Pension at 7.38% and finally the Individual pension plans at 4.7%. male respondents recorded a higher level of awareness than their female counterparts in all schemes except the Mbao Pension Plan as shown in table 3 in the appendix. The main source of information by the respondents on the pension products was the media at 74% with family and friends coming next at 19%. Interestingly, the media informed more female respondents than male as seen in table 5 in the appendix.

The overall participation level of respondents in the existing pension products was 55% while 45% never participated in the existing products. In addition, male respondents had a higher participation rates than their female counterparts. This participation relates to actual saving in either NSSF or Mbao Pension by the respondents and is reflected in table 4 in the appendix. When awareness and participation levels are put together in a matrix table, participation levels in the existing pension schemes by the informal sector was generally half of the awareness level. This can be clearly seen in table 6 and figure 1 in the appendix.

4.2.4 Financial Literacy Levels

Financial literacy was measured on a 4-point scale on each of the eight questions asked. From table 7 below, the respondents that ranked as 'to a large extent' and 'to a moderate extent' were considered as literate. Those in the 'to a less extent' and 'not at all' were in the illiterate group. The average financial literacy level for the informal sector was at 12.9% with the male respondent having a rate of 14.3% compared to their female counterparts at 11.3%. This has been summarized in table 7 in the appendix

4.2.5 Relationship between Financial Literacy and Pension Preparedness

The financial literacy measures were regressed against pension preparedness together with other controlling variables in the equation below

$$R_p = \alpha + \alpha(\text{FL}) + \alpha(\text{age}) + \alpha(\text{income}) + \alpha(\text{marital status}) + \alpha(\text{education level}) + \epsilon_{ij}$$

Using 95% confidence limit, the results in the table below were obtained

Level of preparedness	Coef.	Std. Err.	P>z
Marital status	0.06	0.42	0.885
Gender	-0.35	0.34	0.311
Age	0.04	0.02	0.070
Monthly income	0.31	0.14	0.024
Position in business	0.25	0.43	0.569
F Literacy	0.66	0.27	0.015
Education level	0.63	0.52	0.220
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/cut1	2.44	0.80	
/cut2	4.92	0.89	
/cut3	7.34	1.16	
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Number of obs	150		
LR chi2(7)	21.31		
Prob > chi2	0.0033		
Pseudo R2	0.0705		
Log likelihood	-140.61		

From the above, only age, monthly income and financial literacy were found to be significant at 95% confidence limit. Marital status, gender and education level were found to be insignificant in retirement preparedness of the respondents.

4.3 Summary and Interpretation of Findings

A major finding in this study was that majority (83%) of the respondents were relatively young (below 40 years), 63.7% were married, and 75% of them attained only up to secondary school level and 68% of them had monthly incomes of lower than Kshs 12,000. According to Arnone (2004), financial literacy is affected by age. According to him, older individuals are likely to be more knowledgeable on pension finance matters and that retirement savings increase with age. This in effect is expected to pension preparedness. In the regression model in this study, age was found to significantly affect pension preparedness.

In this study, 68% of the respondents had attained up to secondary school level. In Kenya, since most key financial concepts are taught in colleges and universities, it means most of them lack the opportunity to learn these concepts in a formal way, hence the low finance literacy levels. This finding agrees with the findings in Skog (2006) where it was found that more educated men display more finance literacy across the board. Otsola and Njuguna (2011) also found that education level affect financial literacy (and effectively pension preparedness).

Another major finding in this study was that pension coverage (NSSF and Mbao) of the informal sector is at 36.8% (with 7.2% being Mbao pension). This is a relatively lower figure compared to the formal sector coverage of 53% (RBA, 2008). In another study (Nyakundi, 2009), the NSSF coverage of formal sector employees excluding public service employees accounts up to 70%. The coverage of the Mbao Pension Plan in the informal sector was at 7.2%. Although no previous study on Mbao Pension has been able to give the level of coverage, efforts need to be improved to increase uptake.

Another key finding is that the overall awareness level of the respondents on the existing pension products was 89%. A majority of the respondents were aware of NSSF (76.5%) followed by Mbao Pension at 7.38% and finally the Individual pension plans at 4.7%. one of the big question is why this level of awareness cannot be converted to actual participation? From the analyzed data in this study, the level of participation in these schemes is approximately half of the awareness level. In Njuguna (2012), a key finding was that a majority of the informal sector workers (85.3%) were willing to join a government supported pension plan, and that a majority of these (55%) indicated that they would prefer to save more than three times in a month. in line with the Njuguna study, it was expected that there would not be a significant difference between the level of awareness and participation of the informal sector workers.

The overall financial literacy level in this study was found to be very low at 12.5%. Given the demographic characteristic of the sample of most of them being young and a majority of them having only reached up to secondary school level, it was expected that the financial literacy level would be level in accordance with Arnone (2004). This financial literacy level is too low as compared to the one on the Occupational Pension schemes in Njuguna and Otsola (2012). In this study, although the overall pension literacy level of the respondents drawn from the formal sector was at 53.7%, the researchers had predicted that the overall literacy level would be low for the informal study. This is consistent with what has been found in the informal sector study in this paper. According to Njuguna et al (2011), pension finance literacy enables individuals to plan for retirement and make proper choices on pension products. This lower level of financial literacy in study further explains why pension saving (participation) has been low.

The relationship between financial literacy and pension preparedness was first found by Lusardi and Mitchell (2006). These researchers found that those who displayed financial knowledge were more likely to plan and succeed in their retirement planning. Moreover,

those who did plan were more likely to rely on formal methods such as retirement calculators, retirement seminars, and financial experts, and less likely to rely on family/relatives or co-workers. This study found that there exists a significant positive relationship (at $P=0.05$) between financial literacy and pension preparedness among members of the informal sector. This is in line with the original Lusardi study on the relationship. Additionally, this is also consistent with what Gitari (2002) found in the study on the occupational pension schemes in Kenya. A majority of the respondents in this informal sector study got their pension information on mainly the media and relatives (family and friends). As suggested by Lusardi et al (2006), the use of such informal methods depicts of a less financially literate population. It is therefore by no accident that this study on the informal sector showed very low levels of financial literacy, further supporting the existence of the positive relationship between financial literacy and pension preparedness.

This study also found that age and income levels have a significant effect on pension preparedness. Marital status was also found to have no significant effect on pension preparedness. This is in line with what was found in Gitari (2002) in a similar study focusing on the formal sector. However, contrary to the Gitari study, the researcher found that education level did not have a significant effect on pension preparedness.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

Saving for old age is one of the most important decisions individuals have to make over their lifespan. It has been found that financial literacy helps individuals plan for their retirement adequately but efforts to test this in the informal sector has been rare. In Kenya, like any other country in the world, relatively low levels of financial literacy have been reported. Although some studies have been done locally on the formal sector, little is known on the informal sector.

This study therefore sought to find level of awareness and participation among informal sector members on the existing pension schemes, finding the literacy level of the members of the informal sector and finally seeking to find if there existed a relationship between financial literacy and pension preparedness among members of the informal sector. This study used a descriptive survey design. Stratified random sampling method was used to pick small scale traders from each of the five categories namely second hand clothes dealers, small shops and Kiosks, Jua Kali Artisans, and vegetable & fruit vendors in some of the busy markets in Nairobi. The sample size for the study was 150 respondents. Primary data was collected using questionnaires. Data was analyzed using descriptive statistics such as percentages and frequencies. A regression analysis was done on retirement preparedness and financial literacy. The findings of the quantitative data were presented in tables, figures and charts.

The study revealed that only 36.8 % of the informal sector workers in Nairobi were covered by the formal pension schemes. Although the study found a high level of awareness on the existing pension products (76%), only half of them actively participated in the schemes. Finally, the study found out that financial literacy had a significant positive relationship on pension preparedness.

5.2 Conclusions

People can only prepare adequately for retirement if they start saving early in their lives. One of the key factors that affect pension participation is the financial literacy level of the participants. If the participants have a high level of financial literacy, they are able to make key decisions that involve money in such a way that there is minimal risk to them. These would usually make the use of experts. Those who have low levels of literacy will have to rely on other sources like the media, employers, friends and relatives. These may not offer the best advice to the person in need. The level of financial literacy among the members of the informal sector was found to be very low due to the fact that most of them had only reached the secondary school level. At this stage, one is not able to have learnt most concepts that are available in colleges or other institutions of learning. This can clearly explain why pension participation and preparedness is very low. Unless and until the issue of financial literacy of the general population is addressed, we may never realize the securing of the old age of the generations to come.

Pension products also need to be fully developed in such a way that all people irrespective of the sectors they participate in can access and save conveniently. The only two avenues that the informal sector can safely save in at the moment are through the NSSF and Mbao pension plan. The marketing efforts by RBA have been good and they seem not enough to quickly enable people start saving. There is need to increase efforts in terms of repackaging the message and using other channels of communication. Over a half of the population cannot access a television, thus not being reached. Once these other channels are used then people will be able to access products that are good to them. This requires a multi sectorial approach to make it very effective.

5.3 Recommendations to Policy and Practice

Given the size and important contribution the informal sector plays in the Kenya economy, there needs to be urgent policy changes to turn change the current state of affairs in pension preparedness.

With a majority of the informal sector getting most of their information on pension through the media, there is need to strengthen and repackage the information being aired to the masses on the importance of pension savings. These packages should be designed in a way that they can yield to eventual participation.

The government should also design a special program of reaching the informal sector workers through seminars and workshops on pension matters. Such programs should be evaluated on a regular basis to find their effect on the beneficiaries. Such program should be enriched in such a way that it helps improve financial literacy levels among the informal sector workers. Such programs could be rolled out through member associations of the various sectors in the informal sector.

The government should consider introducing incentives to informal sector workers to influence pension savings. Such incentives could include matching of pension contributions to a certain percentage of the contributors to specific products say Mbao pension plan. This can drastically increase the uptake.

5.4 Limitations of the Study

The researcher experienced a number of limitations while carrying out the research. The major limitation was the limited literature available on similar work in Kenya with most of the literature references were from the Western world.

Another major limitation was the nature of the informal sector, that most respondents were very busy in their work and afforded little interruptions. This is due to a high level of competition with the next competing businesses being within few meters from each other, and every business has to compete for the few available customers.

The limitation above, coupled with the constraints of time and financial resources also meant that a lot of time was required to answer a relatively short questionnaire; hence the time taken to collect the data for the sample of 150 was longer than expected.

The informal sector has been relatively unregulated in the recent past. With the introduction of the counties and the aggressiveness of the government to include most of them in their revenue collection targets has made them quite uncooperative in giving information on their businesses. The respondents feel that such researches are an indirect way of collecting key information to target them with tax levies in the future, hence their adamancy in providing key information touching on their incomes.

5.5 Suggestions for Further Research

Given the enormous size of the informal sector, the sample size of 150 was too small to provide a general representation of the sector. Future research should target more respondents in more sub sectors in the informal sector to be more representative.

This study was carried out in a few markets in Nairobi County, which may not give the total picture of the country. This study should be replicated to other counties in the country to have general information on the informal sector in Kenya.

Future studies should be carried out to find the factors leading to a low uptake of the Mbao Pension Plan in the informal sector and what needs to be done to improve uptake.

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APPENDICES

1. Research Questionnaire (Confidential)

NB: The findings of this research are for academic purposes only

PART A- GENERAL INFORMATION

Please tick the appropriate bracket

1 what is your gender?

Male [] Female []

2 What is your age?

----- Years

3 What is your marital status?

Married [] Single []

4 Highest education level attained

Primary []

Secondary []

College/Technical School/ Polytechnic []

University []

Other (Please specify) []

5 What is your monthly gross income?

Below Kshs 6,000 ☐

6,001- 12,000 ☐

12,001-18,000 ☐

18,001- 24,000 ☐

24,001- 30,000 ☐

Above 30,000 ☐

6. Position in business

Owner ☐

Employee ☐

7. Industry of your business

Second hand clothes dealer ☐

Small shop and Kiosk ☐

Jua Kali Artisan ☐

Fruits and Vegetables vendor ☐

Food processing ☐

Others specify

Retirement preparedness:

1. In your own words, how can you define retirement in your practice

2. What are you doing to prepare yourself for retirement so that in case you are no longer able to work,

Cash savings in a bank account	
Investment in shares, bonds, mutual funds	
Land and buildings (real estate)	
NSSF	
Mbao Pension Plan	
Others (please specify)	

3. Which pension schemes are you aware of (*let the respondent mention first and then you can read to them the choices below*)

Name of the pension scheme	Code
1= NSSF 2= Individual pension schemes 3= Mbao Pension Plan	
4= Other Specify 5=Do not know	

4. Please indicate the pension schemes that you actively participate in

Name of the pension scheme respondent participates in	Code
1= NSSF 2= Individual pension schemes 3= Mbao Pension Plan	
4= Other Specify 5=Do not know	

5. How did you get the information on the above pension schemes? Please tick all that applies to you

Source of information	Check if the respondent used the source
The media (radio, TV, Newspapers)	
Family and friends	
Trainings and workshops attended	
Others, please specify below	

6. If you were to retire or stop working today, how would you gauge your **retirement preparedness** based on the resources you have been setting aside for this purpose?

/_____/

Not prepared=0

Least prepared=1

Prepared=2

Much prepared=3

Very much prepared=4

SECTION B: FINANCIAL LITERACY

These questions are intended to measure finance literacy levels. Use the key below and tick as appropriate

Not at all [0]; To a less extent [1]; To a moderate extent [2]; To a large extent [3]; To a very large extent [4]

Please indicate to what extent you agree or disagree with the following statements under each category below

	Not at all	To a less extent	To a moderate extent	To a large extent	To a very large extent
1. I know about investments (stock, bonds, mutual funds)					
2. I have invested in stock, bonds or mutual funds					
3. I know how to calculate interest on my investments					
4. Investing in the stock market by buying a wide range of stocks and shares can help to reduce risks					
5. Investing in ordinary shares yields a higher long-term growth as compared to treasury bills					
6. I use financial knowledge to make personal financial decisions					
7. I understand investment options for pension schemes					
8. I can calculate benefits due to me on retirement					

Thank you for your time and information

List of Tables

Table 1: Demographic characteristics of the sample

		Frequency	Percent
Gender of respondent	Male	97	64.7
	Female	53	35.3
	Total	150	100.0
Age of respondent	30 and below	80	53.3
	31 to 40 years	45	30.0
	Above 40 years	25	16.7
	Total	150	100.0
Marital Status of respondent	Single	46	30.7
	Married	104	68.7
	Total	150	100.0
Highest education attained	Primary School	38	25.5
	Secondary School	74	49.7
	College/technical/Tertiary	32	20.8
	University	6	4.0
	Total	150	100.0
Business ownership	Owner	122	81.3
	Employee	28	18.7
	Total	150	100.0
Monthly Income of respondent	Below Kshs 6000	35.0	23.3
	6001-12000	67.0	44.7
	12001-18000	29.0	19.3
	18001-24000	7.0	4.7
	24001-30000	4.0	2.7
	Above 30000	8.0	5.3
	Total	150.0	100.0

Table 2: Retirement saving activity of respondent

		Frequency	Percent
	Savings in bank	79	31.6
	Investment in shares,bonds,mutual funds	18	7.2
	Land and buildings (Real estate)	35	14.0
	NSSF	74	29.6
	Mbao Pension Plan	18	7.2
	Not Saving at all	18	7.2
	Business expansion	2	.8
	Educating children	6	2.4
	Total	250	100.0

Table 3: Pension Products awareness

	Female (n=53)	Male (n=97)	all (n=150)
NSSF	71.7	79.17	76.51
Individual pension plan	1.89	6.25	4.7
Mbao pension	11.32	5.21	7.38
Not aware	15.09	9.37	11.41

Source: Researcher's finding

Table 4: Pension products participation

	Female (n=53)	Male (n=97)	all (n=150)
NSSF	34	52	45
individual pension plan	4	5	5
Mbao pension	6	3	4
Others	2	0	1
None	55	40	45

Source: Researcher's finding

Table 5: Source of pension information of respondents

	Female (n=53)	Male (n=97)	all (n=150)
The media	79	71	74
Family and friends	17	21	19
Training & workshops	2	4	3
Do not know	2	4	3

Table 6: Pension Awareness versus Participation

		Awareness	Participation
Female	NSSF	71.7	34
	individual pension plan	1.89	4
	Mbao pension	11.32	6
Male	NSSF	79.17	52
	individual pension plan	6.25	5
	Mbao pension	5.21	3

Figure 1: Awareness and participation levels of existing pension schemes

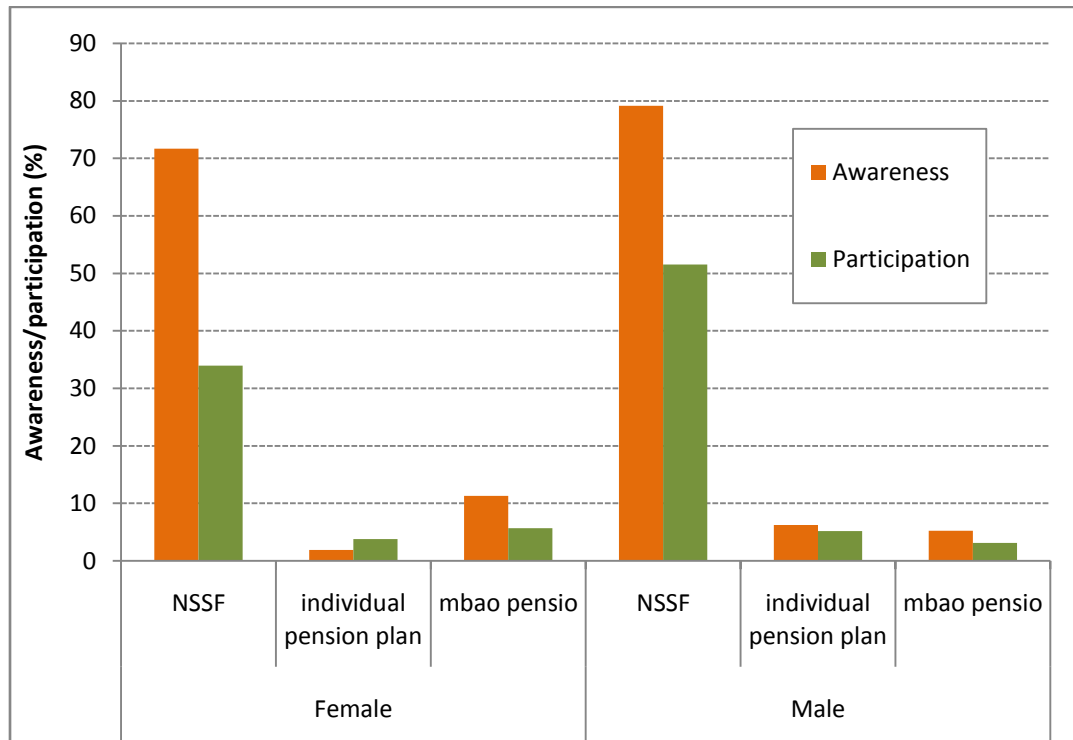


Table 7: Financial literacy levels

		To a large extent	To a Moderate extent	To a less extent	Not at all
Male (n=97)	knowledge of Investments (shares,bonds)	0	7	48	44
	Investment in Stocks, bonds and mutual fund	0	16	30	54
	Calculation of interest of investment	4	20	34	42
	Knowledge of risk diversification in investment	3	24	31	42
	Knowledge of higher returns in the longterm of shares	2	23	37	38
	Level of use of Financial Information for decision making	34	31	25	10

	Level of knowledge in pension benefits calculation	12	26	29	33
	Level of understanding of Pension Investment	11	21	35	33
Female (n=53)	knowledge of Investments (shares,bonds)	0	6	34	60
	Investment in Stocks, bonds and mutual fund	0	9	25	66
	Calculation of interest of investment	6	15	32	47
	Knowledge of risk diversification in investment	0	17	17	66
	Knowledge of higher returns in the longterm of shares	6	9	23	62
	Level of use of Financial Information for decision making	28	36	30	6
	Level of knowledge in pension benefits calculation	11	17	30	42
	Level of understanding of Pension Investment	8	13	32	47