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PENSION UPTAKE AMONG INFORMAL EMPLOYEES OF  
KENYA PORTS AUTHORITY**

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## EFFECT OF DEMOGRAPHIC CHARACTERISTICS ON MICRO-PENSION UPTAKE AMONG INFORMAL EMPLOYEES OF KENYA PORTS AUTHORITY

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### Abstract

**Purpose:** The purpose of this study was to examine the effect of demographic characteristics on micro-pension uptake among informal employees of Kenya Ports Authority.

**Methodology:** The study adopted a descriptive survey design. The target population comprised of the informal employees of Kenya Ports Authority. There are 2500 informal employees at Kenya Ports Authority. A sample size of 96 informal employees was selected through simple random sampling. The study used primary data which was collected through questionnaires which comprised of both open ended and close ended questions. Quantitative data was analysed using both descriptive and inferential statistics. Descriptive statistics such as percentages, mean, frequency distribution and standard deviation were computed to describe the characteristics of the variables of interest whilst with inferential statistics, correlation and multiple regression analysis was used to establish the nature and magnitude of the relationships between the variables. All the analysis was done using SPSS statistical package version 20. Content analysis was also used for qualitative data. The results of data analysis were presented using figures and tables for easy understanding and interpretation.

**Findings:** The study findings indicated that financial literacy; income level and socio demographic characteristics influence the micro pension uptake. The study found that despite the above average literacy level among Kenyans; effort should be done to increase their participation in the management of their pension schemes. Based on findings it was possible to conclude that there was a positive and significant relationship between level of income and micro-pension schemes, similarly higher income level is strongly related to higher willingness. The findings also indicate that social demographic is a key factor in explaining micro-pension schemes.

**Unique contribution to theory, practice and policy:** With a majority of the informal sector getting most of their information on pension through the media, the study recommends that 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. It is recommended that there is a need for young people to begin saving for retirement as early as possible, and that starting early gives the total savings 'pot' longer to

benefit from interest or investment growth. Further, it recommends that the government should also design a special program of reaching the informal sector workers through seminars and workshops on pension matters. It is recommended that future studies should be carried out to find the factors leading to a low uptake of the Micro-Pension schemes in the informal sector and what needs to be done to improve the uptake.

**Key words:** *demographic characteristics, micro-pension uptake, informal employees, financial literacy, retirement planning*

## 1.0 INTRODUCTION

Millions of unorganized and informal sector workers in the developing world are excluded from formal pension and social security systems (Rutherford, 2009). Old-age economic security is a considerable problem for such populations and providing adequate and secure income flows in the future is a formidable challenge. The problem is aggravated by demographic transitions associated with significant increases in life expectancy and changing social structures including the breakdown of the traditional extended family system, making today's workers vulnerable to unmitigated longevity risks, uncertain health costs, and poverty in their post retirement period. Further, with underdeveloped annuity markets and poor financial literacy, workers face considerable challenges in retirement planning and decision-making. To address these challenges, a market for micro pensions targeted at this population has emerged in recent years (Bloom et al., 2010).

Micro pensions are defined contribution pensions, most involving fixed voluntary contributions over a long period of time; the assets are then professionally invested and, at some predetermined age, the funds are disbursed either as a lump sum or as phased withdrawals. Asher (2009) noted that the need for micro pensions for the informal sector workers is particularly important in view of rising life expectancy and massive changes in migration and family characteristics.

In countries with high levels of informal employment, social security coverage rates often remain legally restricted to those, frequently a small minority, working in the formal labour market. This coverage problem occurs in most middle- and lower-income countries. Worldwide, only 26 per cent of the working population is effectively covered by social security old-age benefits programmes (ILO, 2010). In Africa as of 2010, about a third of workers were legally covered by social security old-age benefit programmes, but effective coverage was substantially lower. In sub-Saharan Africa, effective coverage by contributory programmes is about 5 per cent, while in North Africa it is about 20 per cent (ILO, 2010).

Extending social security programmes designed originally for the formal sector to the informal sector is challenging. Leaving important legal and practical administrative issues aside, extending coverage to the informal sector is difficult because generally these workers have low and variable cash incomes. For these reasons, they cannot make regular contributions and contribution rates that may be reasonable for the formal sector are often too high for workers in the informal sector. Also, low-income workers might not see the benefits provided by those programmes as being relevant to their needs and for addressing the multiple risks with which they are confronted across the life cycle (Morris et al., 2007)

Alongside social security systems, financial services products are important tools to better manage risk across the life cycle. Low-income people, including many in informal employment,

despite having similar needs as higher-income and formally-employed people for loans, savings instruments, and pensions, generally are not well served by banks and other financial institutions. In this sense, when it comes to accessing formal “social risk management” (Holzmann & Jorgensen, 2000) mechanisms, the poor and those working in the informal economy are very often doubly excluded. In turn, a further challenge is that traditional “informal” support systems in many countries are weakening due to changes in demographic patterns, cultural behavior and the socio-economic context, thus leaving vulnerable populations further exposed to the impacts of downside risks.

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 and Mitchell (2013) further defined financial literacy as people’s 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.

Mitchell, et al. (2007) explains that various studies explain that gender, race, background, behavior, and attitudes have an impact on retirement planning. Furthermore, studies show that education plays a part in all of the categories mentioned. Lusardi (2013) explain that four major characteristics have been established to examine household savings behaviors. The characteristics are expectations about the future, past economic circumstances, preferences and Pension and social security wealth. Lusardi and Mitchell (2006) opine that while more is being learned about the causes and consequences of financial illiteracy, one must be cautious when concluding that financial education has a potent effect on retirement saving for four reasons. First, a small fraction of workers ever attend retirement seminars, so many are left untouched by this initiative. Second, widespread financial illiteracy will not be “cured” by a one-time benefit fair or a single lecture on financial economics. Third the finding that people have difficulty following through on planned actions suggests that education alone many not be sufficient. Fourth, people differ widely in their degree of financial literacy and saving patterns are very diverse.

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

More than 80% informal sector workers are not covered by any pension scheme (Retirement Benefits Authority, 2010). A key policy issue in developing countries is how to get participants in the informal sector to save and plan for retirement as a result of which over 90% of the population in Sub Saharan Africa and South Asia are not covered by any pension arrangement (Keizi, 2007) due to general unemployment, low incomes, poor saving culture and above all pension arrangements that only favour workers in the formal sector (Kakwani et al., 2006). Informal workers' characteristics that alienate them from formal pension arrangements include; their continuous change of jobs, frequent opts to self-employment, temporary nature of their employment contracts, they live in remote rural areas or urban slums, they are often illiterate and unfamiliar with the concept of pensions and they have little experience of dealing with formal financial institutions (Uthira & Manohar, 2009).

Millions of low-income workers in Kenya largely working in the informal sector are unable to save for retirement because of a lack of pension products designed to accommodate them and fear that their pension savings may be inaccessible after retirement; this is according to a research conducted by the United States International University (USIU, 2010). It also found that only 6 percent of informal low income workers in Kenya are saving for pension. "Those with a pension plan only save 10 percent of their income, which is a very small figure considering that the average monthly income is 6000 shillings," said Dr. Amos Njuguna, a lecturer at the USIU's Chandaria School of Business and the lead researcher for the research.

Low income earners have two opportunities to save for pension, through the government owned agency known as the National Social Security Fund (NSSF), which requires mandatory saving for those in formal employment, and the other scheme, by pension industry regulator, the Retirement Benefits Authority (RBA) that offers daily savings opportunity of 20 shillings per day. The lack of savings for small income earners mostly working in the informal sector is of concern to the government because the sector accounts for 80% of all employed Kenyans meaning that more Kenyans retire without a retirement income, becoming burden to the productive sector. Informal sector workers have the ability and willingness to save but they lack the competence and saving avenues to transform these savings into substantial retirement income, concluded the research.

According to Dr. Njuguna, it is easy to get low income earners in Kenya to save for pension because majority of them, 76 percent, already save their income in their bank accounts and micro finance institutions. The research found out that about 80 percent of informal low income workers have faith in a government supported pension scheme, indicating the challenge for the government to streamline the NSSF to increase its efficiency especially in settling pension for retirees and the families of the deceased. The research also found that most of the small income earners do not know how to join the existing schemes that can accommodate their needs.

According to Okulo (2011) in Kenya, 80 percent of the labour force works in the informal economy and less than 15 percent of the population is covered by social security old-age benefit programmes. Barr and Diamond (2009) notes that key objectives of contributory social security

programmes, such as old-age pension schemes, are to provide income smoothing across the life course and insurance against the risk of longevity for workers. Most old-age social security programmes are financed by mandatory monthly contributions paid by insured workers, with matching contributions paid by their employer. This model presupposes not only a formal employment contract but that the insured worker and employer adhere fully to the rules as regards the collection and payment of contributions to the social security system (Raichura, 2008).

A micro-pension scheme refers to a pension arrangement that supports small, regular and sustainable savings by low income earners so as to provide them with a regular stream of pension annuities for the old-age (Uthira & Manohar, 2009). The Retirement Benefits Authority in Kenya has already operationalized a micro pension scheme where the contributions are a minimum of Kshs. 20 per day. 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).

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).

Micro pension products will enable the poor to focus on managing money for old age. These products will consist principally of medium- to long-term saving schemes that produce capital for reinvestment in real, human, social or financial assets that can create a flow of income to support the non-working elderly. In some cases the reinvestment will be in real property for rental, or in the businesses or education of family members in exchange for future income or subsistence support. But, crucially, micro pension products will also offer the option of reinvestment in a financial asset that produces a flow of income: either interest income, or perhaps by the purchase of an annuity, which is the financial product that specializes in maximizing income streams (Rutherford, 2009).

### **1.1 Statement of the 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 (Nyakundi, 2009). 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. As a result, Kenya's social security policies have not lived up to the expectations of providing an inclusive social protection for the population especially the labour force in the informal sector and seems to have secluded informal workers from any form of social protection. Due to this there has been 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.

Micro-pension arrangements are meant to insulate low-income earners against old-age poverty. 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. This study therefore explored the effect of demographic characteristics on micro-pension uptake among informal employees, the general attitudes of the informal sector workers towards saving for old age and what they thought about the existing pension schemes specifically designed for them.

There are studies done locally on pension schemes with most of them touching on the overall reform issue and the general review of the pension system in Kenya. For instance, 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. In yet another study Nyakundi (2009), the researcher provided key legal and policy framework required to enhance the pension coverage in Kenya. In Njuguna and 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. It is thus evident that there is lack of focus on the informal sector and thus this study attempted to bridge the gap by assessing the effect of demographic characteristics on micro-pension uptake among informal employees of Kenya Ports Authority.

## **1.2 Research Objectives**

- i. To establish the effect of financial literacy on micro-pension scheme uptake among the informal sector employees of KPA.
- ii. To analyze the effect of income level on micro-pension scheme uptake among the informal sector employees of KPA.
- iii. To determine the effect of socio-demographic profiles of individuals on micro pension scheme uptake among the informal sector employees of KPA.

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical review**

#### **2.1.1 Life-Cycle Theory of Savings**

According to the life-cycle model of savings, people save when young to finance consumption during retirement. In theory, in the absence of a bequest motive, the dissaving of the old should offset the saving of the young, so that in a stationary population (with a stable age distribution and no population growth) there is no aggregate saving. However, if the age structure of the population is unbalanced, as occurs under population growth, or if the economy is undergoing rapid economic growth and the wage incomes of the young are high relative to the retirement incomes of the old, the savings of different cohorts may not cancel out, and aggregate savings, or dissavings, may occur (Ando & Modigliani, 1963).

In addition, Fry and Mason (1982) and Mason (1988) point out that the presence of children increases the consumption requirements of young families, so that high rates of youth dependency can depress saving and lower the impact of economic growth on savings rates. Investigators have studied these age-structure and growth effects extensively and have found that, in general, national savings rates are higher when dependency rates are low and economic growth is rapid (Higgins, 1998; Higgins & Williamson, 1997; Kelley & Schmidt, 1996).

### **2.1.2 Social Exchange Theory**

Thibaut and Kelley (1959) advanced this theory which uses the economic metaphor of cost and benefits to predict behavior. The theory assumes that individuals and groups choose strategies based on perceived rewards and costs, where they factor in the consequences of their behavior before acting in order to keep their costs low and rewards high. The social exchange theory can be defined as a strategic behavior by more informed partner in a contract against the interest of the less informed partner(s). It's relevant in the micro pension market because each individual chooses among the set of contracts offered by through the scheme. The scheme usually has a varied of products on offer and thus individuals need to evaluate whether costs and benefits of engaging in the scheme to their probability of taking up the products of the micro pension scheme. In other words, those who foresee an intense use of micro pension will tend to choose more generous plans than those who expect a more limited use of them. (Morris et al., 2007; Wagstaff, 2010).

## **2.2 Empirical Review**

### **2.2.1 Effect of Financial Literacy on Micro-Pension Scheme Uptake**

Collins, Kuwornu and Tsegai (2014) conducted a study on the willingness to participate in micro pension schemes among the Ghanaian workforce. The study was a hypothetical exploratory research to identify underlying factors explaining four urban informal groups (beauticians, drivers, vegetable farmers and woodworkers) decision to participate in a Micro Pension Scheme. A Binary Logit regression model was subsequently used to estimate the factors influencing the participation decision. The survey found a high (87.75%) willingness to participate among the urban informal workers. The empirical results of the Binary Logit model revealed that years of schooling was important in explaining the decision of an urban informal worker to participate. Particularly, the results indicated that years of schooling had a positive influence on drivers and vegetable farmers' willingness to participate in the micro pension scheme, being significant at 5% and 10% respectively.

Results from a study by Sanusi et al. (2009) in Nigeria indicated that 87% of the respondents were aware of the national health insurance and about 83% were registered in the scheme. Factors such as employment level were significantly associated with awareness while gender, income level, family size, marital status and education level were not significant factors influencing awareness of the respondents about the scheme. There may be a challenge in differentiating between awareness and knowledge of health insurance amongst the informal sector as a study in Ghana by Danso (2005) demonstrated. A Kenyan study on pension literacy (Njuguna & Otsola, 2011) also found low levels of financial literacy among Kenyans in the Occupational Pension Schemes. 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.

Njuguna and Otsola (2011) in their study 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. The study found that 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.

### **2.2.2 Effect of Income Level on Micro-Pension Scheme Uptake**

Sahu, (2014) conducted a study on micro pension and economic protection in India. The objectives the study was to analyze the concept and coverage of micro pension scheme for social protection of people in unorganized sector in India. The study adopted a cross-sectional survey where 400 respondents were interviewed. The results of the study showed that informal sector workers in India are especially vulnerable to old age poverty due to their fragile labour market attachments, low intermittent incomes and limited access to regulated long-term savings products and secure banking and payment mechanisms. Furthermore, due to a breakdown of the traditional joint family support systems because of labour migration, the working poor increasingly will need to self-provide for their retirement. Women are even more vulnerable to old age poverty than men as they enjoy a higher life expectancy than men, derive lower incomes in comparable occupations, suffer a shorter working age and frequent interruptions in employment and incomes due to childbirth and other family responsibilities. The market for pensions in India has largely confined to the urban middle income and rich even as 90% of the workforce continues to march towards old age without savings to assist them in managing their twilight years.

Moorthy, Chelliah, Chiau, Lai, Wong, and Wong (2012) conducted a study on the retirement planning behavior of working individuals in Malaysia. The study adopted an explanatory research design where 300 working individuals in the age group of 26 to 55 years participated in the study. The study findings showed that age, education level, income level, goal clarity, attitude toward retirement and potential conflict in retirement are the factors influencing the retirement planning behavior. It was thus concluded that the study be an alert to all the working individuals to prepare their retirement planning in their early life. The study results show that 26 to 35 years is the most suitable age to start to plan the retirement because at that age, the employees show a positive attitude toward retirement. Working individuals might realize that early planning retirement enables working individuals to have strong financial planning to secure them in their afterlife of retirement.

Castel (2008) conducted a study on voluntary defined benefit pension system willingness to participate the case of Vietnam. The study was based on a survey organized by Vietnamese Institute of Labor and Social Study and Analysis to understand the determinants of the willingness of the workers of the informal sector to participate in social insurance schemes. The study results show that the stability of monthly income in relation to consumption needs of the household is strongly associated with higher willingness to participate. Further, positive

coefficients were associated with higher saving rates and higher level of taxes, both indicators of wealth. Similarly higher income level is strongly related to higher willingness. Higher fiscal burden reflected by the tax rate per household income reduces and thus the willingness to participate diminished. Regarding individual characteristics, higher education levels are associated with higher willingness to participate. Finally, the results showed that participation is strongly positively related to the respondent's knowledge about retirement pensions and social insurance coverage in the commune.

### **2.2.3 Effect of Socio-Demographic Profiles of Individuals on Micro-Pension Scheme Uptake**

Collins, Kuwornu and Tsegai (2014) conducted a study to examine the effect of socio-demographic profiles of individuals on micro-pension uptake among the Ghanaian workforce. The study adopted a descriptive research design and the regression results from the study indicated that the household size was also found to influence urban informal workers decision to participate in the Micro Pension Scheme. Result showed that an increase in the household size by one member leads to a 1.7% reduction in probability of willing to participate in the scheme. Marital status of an urban informal worker has a positive influence on their willingness to participate in the hypothetical Micro Pension Scheme.

Holzmann et al. (2001) who analyzed the determinants of pension participation in Chile and Argentina and found that as age increases, the probability of contribution to the pension scheme decreases. Their result suggested increases in the probability of contribution, except for individuals of retirement age 65 in Argentina and individuals age over 40 in Chile who had a decreasing probability of contributing. A study by Bhageerathy et al. (2009) in India found out that in order to gain and retain members in the informal sector, the national health scheme required to rebrand and target indicators such as socio economic status which was found to have a significant impact on the level of awareness and attitude of respondents towards health insurance which influenced the amount of premium payable. In Gitari (2012), the researcher conducted a study to find the relationship between demographic profiles of individuals and retirement planning. The study focused on the 787 registered pension schemes in Nairobi. The study results showed found that age and marital status were found to be statistically insignificant to retirement planning.

## **3.0 RESEARCH METHODOLOGY**

This study adopted a descriptive survey design. The target population comprised of the informal employees of Kenya Ports Authority. There are 2500 informal employees at Kenya Ports Authority. A sample size of 96 informal employees was selected through simple random sampling. The study used primary data which was collected through questionnaires which comprised of both open ended and close ended questions. The collected data was coded and analyzed in Statistical package for social science (SPSS). Quantitative data was analysed using both descriptive and inferential statistics. Descriptive statistics such as percentages, mean, frequency distribution and standard deviation were computed to describe the characteristics of the variables of interest whilst with inferential statistics, correlation and multiple regression analysis was used to establish the nature and magnitude of the relationships between the variables. All the analysis was done using SPSS statistical package version 20. Content analysis

was also used for qualitative data. The results of data analysis were presented using figures and tables for easy understanding and interpretation.

## **4.0 RESULTS AND DISCUSSIONS**

### **4.1 Response Rate**

The number of questionnaires that were administered to all the respondents was 96 questionnaires. A total of 71 questionnaires were properly filled and returned from the Kenya Ports Authority employees.

### **4.2 Demographic Characteristics**

The study sought to establish the gender of the respondents. Results indicated that the majority (66.2%) were male while the rest (33.8%) were female. The finding implies that there is a gender imbalance as far as construction is concerned. The study findings implies that majority of the informal employees at KPA are male. The respondents were asked to indicate their age brackets. Results revealed 58% of the respondents were aged between 26 to 35 years and 32% were aged between 36 to 45 years and 10% indicated between 18 to 25 years of age. The findings imply that most of the respondents were at their career peak.

The respondents were asked to indicate their marital status. Results revealed 57.7% of the respondents were married, 23.9% were single and 18.3% were divorced. The findings imply that most of the respondents were married. Study findings indicate that 41% of the respondents had attained primary level, 38% of the respondent had attained secondary level and 21% had attained tertiary college level. The findings imply that the respondents had low level of education in this sector and perhaps this observed level of education may have had a bearing on the uptake of micro pension schemes. The study found that a majority of employees (40%) had worked for less than (one) 1 year and 38% had worked for a period Between 2 and 4 Years and 21.1% had worked for Above 4 years .The finding implies that there is a high number of employees in the informal sector who are highly labour contributors at KPA .

### **4.3 Descriptive Statistics**

#### **4.3.1 Micro-Pension**

The general objective of the study was to examine the effect of demographic characteristics on micro-pension uptake among informal employees of Kenya Ports Authority. Results in Table 1 shows that 54.9% of the respondents agreed that they belong to a micro-pension scheme provided by through the institution they work for, 73.5% agreed that they belong to a micro-pension scheme provided through a different institution not within the institution I work for, 80.3% of the respondents agreed that the benefits of joining a micro-pension scheme was motivated by the desire to save for future uncertainty such as health risks, risks in case of being laid off and 50% disagreed that the products offered through the schemes are tailored to meet the needs of the workers whose incomes are low and as a result they are affordable and sustainable for the low income groups. The mean score for the responses was 3.4 which indicated that majority of the respondents agreed with the statements on micro-pension to a low extent. This implies that the informal sector employees' uptake of micro pension schemes is still slow.

**Table 1: Micro-Pension**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I belong to a micro-pension scheme provided by through the institution I work for.	11.3%	23.9%	9.9%	35.2%	19.7%	3.28
I belong to a micro-pension scheme provided through a different institution not within the institution I work for.	7.0%	9.9%	9.9%	50.7%	22.5%	3.72
The benefits of joining a micro-pension scheme was motivated by the desire to save for future uncertainty such as health risks, risks in case of being laid off.	7.0%	8.5%	4.2%	66.2%	14.1%	3.72
The products offered through the schemes are tailored to meet the needs of the workers whose incomes are low and as a result they are affordable and sustainable for the low income groups.	14.1%	35.2%	7.0%	29.6%	14.1%	2.94
Average	9.9%	19.4%	7.8%	45.4%	17.6%	3.42

Source: Survey Data (2015)

#### 4.3.2 Effect of Financial Literacy on Uptake of Micro-Pension Scheme

The first objective of the study was to determine the extent to which financial literacy affect uptake of micro-pension scheme among the informal sector employees of KPA. Table 2 shows that majority 63.4%of the respondent agreed that they know the range of products offered by micro-pension schemes, 49.3% of the respondents agreed that they are aware of the financial requirements of joining the micro-pension schemes,52.1%of the respondents agreed that they do not know how pension schemes operate, 47.9%of the respondents agreed that Pension schemes are complex and involving, 71.8%of the respondents agreed that they consider education level to be low and as a result they feel they do not adequately understand what micro-pension schemes offer and 74.7%of the respondents agreed that Individuals with higher levels of education are more likely to join a micro-pension scheme as they are fully informed on the benefits that would accrue to them in a later period. The mean score for the responses was 3.39 indicating that majority of the respondents agreed with the statements on financial literacy to a low extent.

The findings of the study agree with those of Njuguna and Otsola, 2011 who also found low levels of financial literacy among Kenyans in the Occupational Pension Schemes. 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

**Table 2: Effect of Financial Literacy on Uptake of Micro-Pension Scheme**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I know the range of products offered by micro-pension schemes.	4.2%	23.9%	8.5%	45.1%	18.3%	3.49
I am aware of the financial requirements of joining the micro-pension schemes.	15.5%	25.4%	9.9%	32.4%	16.9%	3.1
I have attended financial workshops or trainings and seminars organized by micro-pension schemes aimed at improving the financial awareness and knowledge of the informal sector workers.	11.3%	26.8%	9.9%	33.8%	18.3%	3.21
I do not know how pension schemes operate	8.5%	22.5%	8.5%	39.4%	21.1%	3.42
Pension schemes are complex and involving	7.0%	36.6%	8.5%	31.0%	16.9%	3.14
I consider my education level to be low and as a result I feel I do not adequately understand what micro-pension schemes offer.	4.2%	16.9%	7.0%	49.3%	22.5%	3.69
Individuals with higher levels of education are more likely to join a micro-pension scheme as they are fully informed on the benefits that would accrue to them in a later period.	4.2%	14.1%	7.0%	60.6%	14.1%	3.66
<b>Average</b>	<b>7.8%</b>	<b>23.7%</b>	<b>8.5%</b>	<b>41.7%</b>	<b>18.3%</b>	<b>3.39</b>

#### 4.3.3 Effect of Income Level on Micro-Pension Scheme Uptake

The second objective of the study was to analyze the effect of income level on micro-pension scheme uptake among the informal sector employees of KPA. Results in table 3 illustrates that majority 60.6% of the respondents agreed that they received a low amount of income from the work they are engaged in, 88.7% of the respondents agreed that the income they receive is all spent on household consumption needs and none is left for them to invest, 90.2% of the respondents agreed that the income levels they received is little and they can even hardly meets their household needs and 87.3% of the respondents agreed that their income was not regular. The mean score for the responses was 3.9 indicating that majority of the respondents agreed with the statements on income levels and that income level influences micro pension uptake.

**Table 3: Effect of Income Level on Micro-Pension Scheme Uptake**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I receive a low amount of income from the work I am engaged in.	11.3%	23.9%	4.2%	46.5%	14.1%	3.28
The income I received is all spent on household consumption needs and none is left for me to invest.	0.0%	7.0%	4.2%	57.7%	31.0%	4.13
The income levels I receive is little and I can even hardly meets my household needs.	0.0%	9.9%	0.0%	60.6%	29.6%	4.1
My income is not regular	0.0%	12.7%	0.0%	47.9%	39.4%	4.14
Average	2.8%	13.4%	2.1%	53.2%	28.5%	3.91

The findings of the study agree with those of Castel (2008) conducted a study on voluntary defined benefit pension system willingness to participate the case of Vietnam. The study was based on a survey organized by Vietnamese Institute of Labor and Social Study and Analysis to understand the determinants of the willingness of the workers of the informal sector to participate in social insurance schemes. The study results show that the stability of monthly income in relation to consumption needs of the household is strongly associated with higher willingness to participate. Further, positive coefficients were associated with higher saving rates and higher level of taxes, both indicators of wealth. Similarly higher income level is strongly related to higher willingness. Higher fiscal burden reflected by the tax rate per household income reduces and thus the willingness to participate diminished. Regarding individual characteristics, higher education levels are associated with higher willingness to participate. Finally, the results showed that participation is strongly positively related to the respondent's knowledge about retirement pensions and social insurance coverage in the commune.

#### **4.3.4 Effect of Socio-Demographic Profiles of Individuals on Micro Pension Scheme Uptake**

The third objective was to determine the effect of socio-demographic profiles of individuals on micro pension scheme uptake among the informal sector employees of KPA. Results in Table 4 show that majority 88.7% of the respondents agreed that they considered themselves too young to join a micro-pension scheme, 85.9% of the respondent agreed that their family size was too large and they had so many dependents to gather for, 88.8% of the respondent agreed that being a male, they felt they should plan for their retirement in advance so as to be in a position to still gather for their family during their old age and 88.8% of the respondents agreed that their marital status hinders them from joining the micro-pension scheme due to the responsibilities they had to attend to. The mean score for the responses was 4.14 which indicates that majority of the respondents agreed with the statements on effects of social-demographic on micro pension uptake.

The findings of the study agree with those of Collins, Kuwornu and Tsegai (2014) conducted a study to examine the effect of socio-demographic profiles of individuals on micro-pension uptake among the Ghanaian workforce. The study adopted a descriptive research design and the regression results from the study indicated that the household size was also found to influence urban informal workers decision to participate in the Micro Pension Scheme. Result showed that

an increase in the household size by one member leads to a 1.7% reduction in probability of willing to participate in the scheme. Marital status of an urban informal worker has a positive influence on their willingness to participate in the hypothetical Micro Pension Scheme.

**Table 4: Socio-Demographic Profiles of Individuals**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean
I consider myself too young to join a micro-pension scheme	0.0%	9.9%	1.4%	54.9%	33.8%	4.13
My family size is too large and I have so many dependents to gather for.	0.0%	14.1%	0.0%	52.1%	33.8%	4.06
Being a male, I feel I should plan for my retirement in advance so as to be in a position to still gather for my family during my old age	0.0%	9.9%	1.4%	45.1%	43.7%	4.23
My marital status hinders me from joining the micro-pension scheme due to the responsibilities I have to attend to.	0.0%	11.3%	0.0%	50.7%	38.0%	4.15
<b>Average</b>	<b>0.0%</b>	<b>11.3%</b>	<b>0.7%</b>	<b>50.7%</b>	<b>37.3%</b>	<b>4.14</b>

#### 4.4 Homoscedasticity Test

To test for homoscedasticity, Levene test (1960) for equality of variance was computed using one way Anova procedure. This test was used to assess Variance homogeneity, which is a precondition for parametric tests such as the t-test and ANOVA. If the Levene test is statistically significant, the hypothesis of homogeneous variances should be rejected. The results therefore in table 5 indicated that the Levene statistic was 4.124 and it was further established that the Levene statistic was significant (p-value=0.0). This therefore implies that the null hypothesis is rejected and thus the variances are said to be heterogeneous. Given that the assumption of homogeneity of variance is violated, the regression analysis was thus estimated with the heteroskedastic consistent standard error estimates. This approach was meant to remedy for the violation of the homogeneity of variance as postulated in the classical linear regression assumption.

**Table 5: Homoscedasticity Test**

<b>Levene Statistic</b>	<b>4.124</b>
df1	49
df2	21
Sig.	0.000

#### 4.5 Multicollinearity Test

Multicollinearity in the study was tested using Variance Inflation Factor (VIF). A VIF of more than 10 ( $VIF \geq 10$ ) indicate a problem of Multicollinearity. According to Montgomery (2001), the cutoff threshold of 10 and above indicates the existence of Multicollinearity while tolerance statistic values below 0.1 indicate a serious problem while those below 0.2 indicate a potential problem. The results in table 6 indicate that the VIF value for financial literacy was established to be 1.996 while its tolerance statistic was reported to be 0.501. VIF value for level of income was established to be 7.293 while its tolerance statistic was reported to be 0.137 VIF value of social demographic was established to be 5.329. Based on these the assumption of no Multicollinearity between predictor variables was thus not rejected as the reported VIF and tolerance statistics were within the accepted range.

**Table 6: Multicollinearity Test**

Variable	Co-linearity Statistics	
	Tolerance	VIF
Financial literacy	0.501	1.996
Income level	0.137	7.293
Socio demographic	0.188	5.329

#### 4.6 Inferential Statistics Analysis

##### 4.6.1 Bivariate Correlation

Results in Table 7 show that there exist a positive and significant ( $r=0.879$ ,  $p<0.000$ ) correlation between financial literacy and micro-pension uptake. This reveals that any positive changes in financial literacy led to increased micro-pension uptake. The relationship has been illustrated by the correlation co-efficient of 0.879, implying positive relationship. This was also evidenced by the p value of 0.000 which is less than that of critical value (0.05). The correlation between the variables indicates that financial literacy enhanced micro pension uptake among the informal sector employees of KPA.

Results in Table 7 further show that there exist a positive and significant ( $r=0.445$ ,  $p<0.000$ ) correlation between level of income and micro-pension uptake. This reveals that any positive changes in level of income led to increased micro-pension uptake. The relationship has been illustrated by the correlation co-efficient of 0.445, implying positive relationship. This was also evidenced by the p value of 0.000 which is less than that of critical value (0.05). The correlation between the variables indicates that improved level of income increases micro pension uptake among the informal sector employees of KPA.

The results indicated also show that there exist a positive and significant ( $r=0.099$ ,  $p<0.00$ ) correlation between social demographic profiles and micro-pension uptake. This reveals that any positive changes in demographic profiles lead to an increase in micro-pension uptake. The relationship has been illustrated by the correlation co-efficient of 0.099 implying positive relationship. This was also evidenced by the p value of 0.000 which is less than that of critical value (0.05). The correlation between the variables indicates that increase in social demographic profiles of income increases micro pension uptake among the informal sector employees of KPA.



**Table 7: Bivariate Correlation**

Variable		Micro pension Uptake	Financial literacy	Income level	Socio demographic
Micro pension Uptake	Pearson Correlation Sig. (2-tailed)	1			
Financial literacy	Pearson Correlation Sig. (2-tailed)	0.879	1		
Income level	Pearson Correlation Sig. (2-tailed)	0.445	0.578	1	
Socio demographic	Pearson Correlation Sig. (2-tailed)	0.099	0.298	0.866	1
		0.000	0.012	0.000	

#### 4.6.2 Regression Analysis

In order to establish the statistical significance of the independent variables on the dependent variable (micro-pension uptake) regression analysis was employed. The regression equation took the following form.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ell$$

Table 8 shows that the coefficient of determination also called the R square is 0.828. This means that the combined effect of the predictor variables (financial literacy, income level socio-demographic profiles) explains 82.8% of the variations in micro-pension uptake. From the model summary table below adjusted R<sup>2</sup> was 0.82 this indicates that the combined effect of predictor variables (financial literacy, income level and socio-demographic profiles) explains 82% of variations in micro-pension uptake. The correlation coefficient of 91% indicates that the combined effect of the predictor variables has a strong and positive correlation with micro-pension uptake among the informal sector employees of KPA.

**Table 8: Regression Model Fitness**

Indicator	Coefficient
R	0.91
R Square	0.828
Adjusted R Square	0.82
Std. Error of the Estimate	0.4298

Analysis of variance (ANOVA) on Table 9 shows that the combined effect of financial literacy, income level socio-demographic profiles) was statistically significant in explaining changes in micro-pension uptake. This is demonstrated by a p value of 0.000 which is less than the acceptance critical value of 0.05.

**Table 9: ANOVA**

Indicator	Sum of Squares	df	Mean Square	F	Sig.
Regression	59.616	3	19.872	107.575	0.000
Residual	12.377	67	0.185		
Total	71.993	70			

Table 10 displays the regression coefficients of the independent variables. The results reveal that financial literacy is statistically significant in explaining micro-pension uptake (beta=0.766 p value 0.000). The findings imply that an increase in financial literacy by one unit leads to an increase in micro-pension uptake effectiveness by 0.766 units. Regression results indicate that level of income and micro-pension uptake had a positive and significant relationship (beta=0.548 p value 0.002). The findings imply that an increase in level of income by one unit leads to an increase in micro-pension uptake 0.548 units. Results further indicated that social demographic profile and micro-pension uptake was negative and significant (beta=0.513, p value 0.000). The findings imply that an increase in social demographic profile by one unit leads to an increase in micro-pension uptake effectiveness by 0.513 units.

**Table 10: Regression Coefficients**

Variable	Beta	Std. Error	t	Sig.
Constant	0.784	0.247	3.176	0.002
Financial literacy	0.766	0.071	10.851	0.000
Income level	0.548	0.169	3.24	0.002
Socio demographic	0.513	0.116	-4.418	0.000

## 5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Summary of Findings

The general objective of the study was to examine the effect of demographic characteristics on micro-pension uptake among informal employees of Kenya Ports Authority. One of the key findings was that the respondents were aware and belonged to a micro-pension scheme. This was demonstrated by the extent of agreement with the statements in the questionnaire in support of the micro-pension uptake.

The first object of the study was to establish the effect of financial literacy on micro-pension scheme uptake among the informal sector employees of KPA. Results indicated that the respondent agreed that financial literacy is a key determinant in explaining micro-pension uptake. This was evident from the response of the respondents who indicated that they knew the range of products offered by micro-pension schemes (63.4%), they were aware of the financial requirements of joining the micro-pension schemes (49.3%), did not know how pension schemes operate 52.1%, and Pension schemes are complex and involving(47.9%). This was also supported by the regression results which indicated that there was a positive and significant relationship between financial literacy and micro-pension uptake (beta=0.766, p value 0.00).

The second objective of the study was to analyze the effect of income level on micro-pension scheme uptake among the informal sector employees of KPA. Results indicated that the level of

income influences micro-pension uptake. This was evident from the response of the respondents who indicated that they received a low amount of income from the work they are engaged in, the income they receive is all spent on household consumption needs and none is left for them to invest (88.7%), the income levels they receive is little and they can even hardly meet their household needs (90.2%) and that their income is not regular (87.3%). The findings was also supported by regression results which indicated that there was a positive and significant relationship between level of income and micro-pension uptake ( $\beta=0.548$ ,  $p$  value 0.002).

The third objective of the study was to determine the effect of socio-demographic profiles of individuals on micro pension scheme uptake among the informal sector employees of KPA. The findings of the study indicate that social demographic is a key factor in explaining micro-pension schemes. This was evident by the response from the respondent who indicated that their family size is too large and they have so many dependents to gather for, being a male, they feel they should plan for retirement in advance so as to be in a position to still gather for my family during my old age (88.8%) of the respondents agreed that their marital status hinders them from joining the micro-pension scheme due to the responsibilities they have to attend to (88.8%).

## 5.2 Conclusions

Base from the study; it was possible to conclude that there was increased and improved Micro-Pension-Schemes uptake among the informal sector employees of KPA. It was possible to conclude that financial literacy is a significant tool in micro-pension-schemes uptake. 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. Based on findings it was possible to conclude that there was a positive and significant relationship between level of income and micro-pension schemes, similarly higher income level is strongly related to higher willingness. It was possible to conclude that social-demographic profile influences uptake of micro-pension schemes. Results revealed that social-demographic profile was important and effective in improving uptake of micro-pension schemes. This further leads to conclusion that marital status of informal worker has a positive influence on their willingness to participate in the uptake of Micro Pension Scheme.

## 5.3 Recommendations

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.

A crucial message to convey to young people is the need to begin saving for retirement as early as possible, and that starting early gives the total savings 'pot' longer to benefit from interest or investment growth. It is also important to communicate that saving even relatively small amounts at an early age reduces the need to save in later life; most participants thought that the sums of money they were able to save were not worthwhile amounts.

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 Areas for Further Study**

Future studies should be carried out to find the factors leading to a low uptake of the Micro-Pension schemes in the informal sector and what needs to be done to improve the uptake. Arising from the findings and the gaps in the study, a replica study is recommended in other Counties in order to test whether the conclusions of this study will hold true. Future studies should apply different research instruments like focus group discussions to involve respondents in discussions in order to generate detailed information which would help improve on the micro-pension schemes uptake.

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