

## **Financial Literacy and Financial Preparedness for Retirement among Permanent and Pensionable Employees in State Owned Corporations in Nairobi, Kenya.**

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### **Abstract**

*Personal finance literature underscore the fact that only a minority of households feel confident about their saving adequacy on retirement because little is known about why people fail to plan and prepare for eventual retirement and even among households with similar socioeconomic characteristics savings and wealth vary considerably. Further, questions abound on whether planning and financial preparedness costs affect retirement saving patterns considering that many households arrive close to retirement with little or inadequate financial resources to maintain their lifestyle. To better understand these issues, exploring the tradeoff between saving and consumption needs to be a priority given that saving for retirement is an important decision individuals in active employment have to make over their working lifespan. This paper therefore sought to investigate the effects of financial literacy on financial preparedness for retirement amongst permanent and pensionable employees in state owned corporations in Kenya. Specifically the study sought to establish the relationship between knowledge of financial instruments as well as the computational capability of retirement benefits and financial preparedness for retirement amongst employees as moderated by demographic characteristics and financial factors. This study used a descriptive survey design. The population for this study consisted of all employees (on permanent and pensionable terms) of state corporations in Nairobi, Kenya estimated to be 4,619 employees. Purposive sampling method was used to select a representative sample of 384 respondents from the 29 state Corporations. The 29 corporations were selected on the basis of those corporations that had headquarters in Nairobi Central Business District, this is arrived at having also considered their long term employment in nature, compliance to statutory requirements on remittance of retirement benefits and above all duty to contribute to government agenda for national development to which preparedness for retirement is considered a major factor. Primary data was collected using self administered questionnaires and the data was analyzed using descriptive and inferential statistics of means, standard deviations and stepwise regression analysis respectively to test the relationship between the independent and dependent variables and presented in tables. The study found that financial literacy positively affects financial preparedness for retirement. However, Knowledge of financial instrument was found to be insignificant while computation capability for retirement was significant. Results revealed that both demographic characteristics and financial factors bore positive statistical relevance. Key words financial literacy, Financial Preparedness retirement planning, demographic characteristics, financial factors.*

### **1.1 Background of the Study**

Financial preparedness implies planning on how to gain control of future financial requirements. Kapoor, Dlabay and Hughes (1994) noted that planning for retirement in advance can help in gaining a sense of control over ones future. Traditional economic theory posits that forward looking individuals maximize expected lifetime utility using economic information to build retirement assets over their work lives, as they also increase their savings fast enough to compensate for declines in other sources of income. Many retirees' often live miserable lives as a result of reduced income upon retirement due to lack of forward planning. One simple and direct way to examine whether individuals look ahead and make plans for the future is to study the extent of retirement planning and how prepared they are (Lusardi, 2007). The reduction in income or lack of it may lead to retirees suffering particularly in up keep and health issues. Economic explanations for these shortfalls include dispersion in discount rates, risk aversion, and credit constraints but the empirical literature has been unable to account for much of the observed wealth differentials (Bernheim, Skinner and Weinberg, 2001). Taylor and Doverspike (2003) opined that wealth and health are two of the most important factors contributing to a successful retirement.

Health is one of the most important issues that people enjoy while they are still in employment. Without adequate wealth and employment, health can be a real challenge as consumption at retirement is not also sustainable thus falls sharply. However, Eric Engen *et al* (2000) observed that budget constraints by itself does not tie down the characteristics of the consumption profile more precisely, and for specific reasons, the consumptions profile accommodates the budget constraint in one or more of three ways. First, for those with lower wealth at retirement, consumption may grow less rapidly over the life cycle, Secondly consumption may decline discontinuously at retirement and this discontinuity may be larger for those with less accumulated wealth at retirement, thirdly those with less accumulated wealth at retirement may bequeath less, consuming more throughout their lives and by studying the individual financial preparedness for life after direct employment thereby identifying the needs to be put into consideration can help one avoid such pitfalls.

### **1.1.1 Financial Literacy**

The term Financial Literacy derives its description from The President's Advisory Council on Financial Literacy (PACFL, 2008), in the U.S that was convened to "improve financial literacy among all Americans." The council defined financial literacy as the ability to use knowledge and skills to manage financial resources effectively for a lifetime of financial well-being. They emphasized that financial literacy goes hand in hand with financial education which they defined as the process by which people improve their understanding of financial products, services and concepts, so they are empowered to make informed choices, avoid pitfalls, know where to go for help and take other actions to improve their present and long-term financial well-being. A consolidation of various definitions by Mandell (2008) and Lusardi & Tufano (2009) show that financial literacy is a specific form of knowledge, ability or skills to apply that knowledge, perceived knowledge, good financial behaviour, and even financial experiences. 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 (2006) 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.

### **1.1.2 Permanent and Pensionable Employees**

As explained by Ouya (2012), permanent and pensionable employment is where the employee is permanently engaged to the organization and is entitled to pension, benefits at the expense of the employment period. Eche (2011) defined pension as a periodical payment and/or a lump sum reward on a contractual legally enforceable agreement between an employer and an employee or any other sum payable gratuitously by the government, employer of labour or organization to its employee in consideration of past services rendered upon cessation of employment. The significance of pension is explained by Nwagwu (2014) in the argument that pension is critical to how a worker will live after retirement. Pension is simply the amount set aside either by an employer or the employee or both to ensure that at retirement, there is something to fall back on as income. It ensures that at old age, retirees will not be stranded financially; rather they will have socio-economic value to society at large and meet their social needs in particular.

The propositions by Blau (1994), Ekerdt, DeViney and Kosloski (1996), Kotlikoff and Sabelhou (1996), Henkens (1998), Yuh, *et al.* (1998), Gist, *et al.* (2004), perceived that most working people do not prepare for retirement and certain opportunity structures specific to retirement finances, like pension plan availability or access to an employer sponsored plans help set the stage for adaptive savings decisions. The reality that many retirees experience lifestyle change after stopping formal employment is evident in the literature. Poterba (1996) observed that many households retire without proper financial preparation. Lusardi, Skinner and Venti (2003) also indicate that many individuals encounter late life financial shortfall that stems from failure to set aside sufficient personal savings during their employment years. Di Vito and Pospiech (2012) opine that as individuals approach retirement, the question of whether they are financially prepared becomes top of mind. The situation of an individual unpreparedness is exhibited by the continued work involvement after retirement age.

This situation is necessitated by several factors like; employers moving away from offering traditional defined benefit plans (pension plans), social security benefits being decreased and delayed, increase in life expectancy alongside a decrease in average age of retirement and old age dependency which has become a major issue of concern to governments today.

### **1.1.3 Financial Preparedness for Retirement**

Keating and Marshal (1980) in a study concluded that on average, individuals do not become interested in retirement finances until they are 48 years of age. The study observed that most of these people start to engage in business while they are just about to retire or when they have retired. According to Kapoor et al. (1994) 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. Current saving for future consumption requires tackling the trade-off between spending and saving. An individual is considered to be prepared for retirement when accumulated savings is sufficiently high to generate income at least equal to a given pre-retirement level of consumption (Yuh, Montalto and Hanna, 1998). Retirement planning has been defined by Magera (1999) as a systematic way of setting aside resources, business project and time for the purpose of providing income in the old age. Warshawsky and Ameriks (2000) explained that financial preparedness for retirement infer that the individual is prepared to maintain a profile of financial independence throughout the entire retirement period and that the kind of lifestyle one was enjoying the time of active employment is able to achieve even after stoppage of active formal employment.

Lusardi, Skinner and Venti (2003) explained that the unfortunate occurrence where many individuals encounter late life financial shortfall that stems, in part, from a failure to set aside sufficient personal savings during their working years. Joo and Grable (2005) observed that not all individuals nearing retirement age are financially prepared to do so. Some of the reasons for this is that some individuals have limited savings and assets available to generate retirement income, some households are myopic and fail to accumulate assets because they do not recognize the value of providing for the future, some maybe unlucky and experience lower earnings or higher expenses than they expected before reaching retirement, others may have higher discount rates and therefore choose to consume a high fraction while working at the expense of lower consumption when retired and still others may have incorrect expectations about their retirement income from social security, private pensions and other sources or about life expectancy and post retirement consumption needs. As observed by Lusardi and Mitchell (2007), fewer than half of Americans have even attempted to estimate how much money they might need in retirement, and many older adults face significant retirement saving shortfalls. While Keizi (2006) explained that the goal of social protection is not mere survival, but social inclusion and preservation of human dignity, on the other hand too liberal use of non retirement purpose runs the risk of depleting accumulated balance and leaving too little capital for retirement. To ensure one is adequately preparing for retirement, Di Vito and Pospiech (2012) posit that a behavioural preparation process ought to occur. First, an individual must be excited about the prospects of retiring to be motivated enough to seek information and advice, and to finally take action to save for retirement. The final step generally involves choosing to save in personal retirement savings account, an employer retirement savings program, or both. The stronger the attitudes and behaviors are before taking the final step of saving in retirement accounts, the greater the likelihood that the chosen financial action would be "adequate" in ensuring a comfortable future retirement. Financial literacy will therefore be a key point of consideration in attempts to establish the preparedness of employees for retirement.

### **1.2 Statement of the Problem**

From the foregoing background, it is perceived that most working people are not preparing adequately for retirement. Recent studies posits that lack of preparedness endanger the life of an individual due to the many pitfalls in life when direct employment stops and certain opportunity structures specific to retirement finances, such as pension plan availability or access to an employer sponsored plans help set the stage for adaptive savings decisions. Bernheim et al. (2001) observe that empirical literature has been unable to account for observed wealth differences resulting from economic explanations notably risk aversion and credit constraints. Githui and Ngare (2014) investigated the impact of financial literacy on retirement planning in the informal sector and noted that Kenya's old age dependency level is estimated at 56%.

Though the study concludes that income greatly affects retirement planning, the sample from the informal sector leads to questions on whether informal sector players really retire. In a related study, Thuku and Ileri (2013) establish that as retirees’ access to retirement information increases, their retirement preparation decreases which is contrary to expectations. Njunguna and Otsola (2011) establishes that financial literacy differs significantly amongst individuals on the basis of demographics (age, education level, gender, job experience, management level, income), pension plan design, participation in previous pension finance literacy program, area of specialization and membership in a pension plan board thereby opening up investigations on the role of demographic variables on the relationship between financial literacy and financial preparedness for retirement. Lubega (2012) found out that age and marital status have no significant impact on both psychological and financial preparation for retirement while Kim, Kwon and Anderson (2005) argues that proximity to retirement (as determined by age), gender, education, marital status are not significant in predicting retirement confidence, The influence of the demographic variables on the relationship is also contradictory with some studies establishing that demographic variables also influence financial preparedness for retirement and other studies concluding that some of the demographic characteristics do not influence the financial preparedness and retirement confidence. These conflicting propositions create the need for such a study. This paper therefore sought to answer the question: Does financial literacy as moderated by demographic characteristics and financial factors determine financial preparedness for retirement amongst employees in the state corporations in Kenya?

**1.3. The Purpose of the Study**

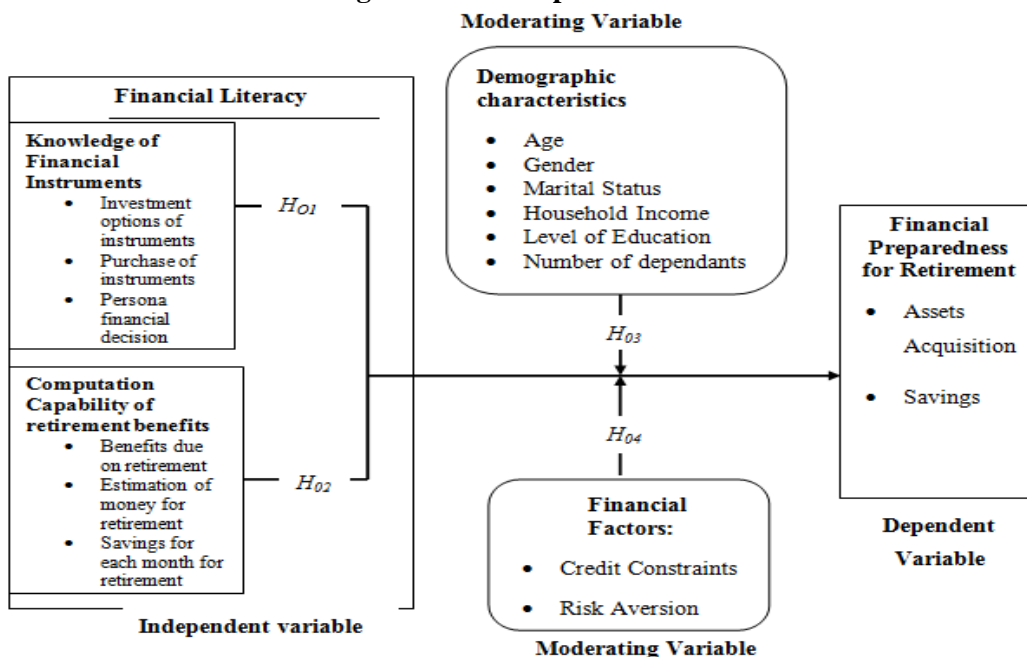
This paper seeks to analyze the effect of financial literacy on financial preparedness for retirement among permanent and pensionable employees in state corporations in Nairobi. Specific Objectives were to analyze;

- i. The effect of knowledge of financial instrument and the effect of computation capability of retirement benefits on financial preparedness for retirement among permanent and pensionable employees in State owned corporations in Kenya
- ii. The effect of demographic characteristics and financial factors as moderating variables on financial preparedness for retirement among permanent and pensionable employees in State owned corporations in Kenya

**2.0 Conceptual Framework**

The figure shows that knowledge of financial instruments and computation capability of retirement benefits influence financial preparedness for retirement with Demographic characteristics and Financial factors as moderating variables.

**Figure 2.1: Conceptual Framework**



### 3.0 Study design and Methodology

#### 3.1. Research Design

Descriptive study design was used in this research. According to Cooper and Schindler (2003), a descriptive study is concerned with finding out of who, what, where, why, and how of a phenomenon. Kothari (2003) recommends descriptive research design as it allows the researcher to describe, record, analyze and report conditions that exist or existed. It is also concerned with relationships and practices that exist, beliefs and processes that are ongoing, effects that are being felt, or trends that are developing. This design is preferred because it was able to give detailed information about a situation that is in existence and it facilitates description of trends, attitudes or opinion of large groups which helps the researcher to learn how financial literacy explains financial preparedness for retirement.

#### 3.2. Target Population and sampling

The population of the study comprised all the employees of State owned corporations based in the Nairobi Central Business District (NCBD). As at April 2015, there were 29 state owned corporations in the NCBD with a total workforce of 4,619. The study used a convenient sampling technique as determined Black, (2005) formula for calculating sample size. A margin of error of 5 percent was allowed for the sample results to be generalized with utmost precision.

$$n = \frac{Z^2 pqD}{d^2}$$

Where, n = the sample size, Z = the standard normal deviate (1.96), p = the proportion of the target population estimated (permanent and pensionable employees). (This proportion is unknown hence it is estimated to be 0.5), q = 1 - p = 1 - 0.5 = 0.5, d = margin of error, taken to be 5% in this study, D (the design effect) = 1

$$\text{Thus, } n = \frac{1.96^2 \times 0.5 \times 0.5 \times 1}{0.05^2} = 384$$

Proportionate sampling technique was then applied to determine the number of respondents of 384 distributed in the various strata. Only those who had at least five years of work experience qualified for sampling.

#### 3.3. Data Collection and analysis

Self administered questionnaires were used to collect primary data by in the Nairobi work stations in a period of 3 weeks. The questionnaires were Pre-tested to ascertain the validity of the data while reliability was ensured through Cronbach Alpha Coefficient that asses the internal consistency of the instruments with alpha coefficients of above 0.7 implying reliability (Cronbach and Shavelson, 2004). Table 3.3 shows the reliability test results.

**Table 3.3 Reliability statistics**

Variable	No. Of items	Alpha	Comment
Knowledge of financial instruments	7	0.813	Reliable
Computation capability of retirement benefits	5	0.801	Reliable
Demographic characteristics	6	0.792	Reliable
Financial factors	11	0.798	Reliable
Financial preparedness for retirement	18	0.902	Reliable
<b>Overall</b>	<b>47</b>	<b>0.821</b>	Reliable

**Source: Survey data (2015)**

Generated data was analyzed using descriptive and the inferential statistics. Descriptive statistics was used to obtain an understanding of the respondent's characteristics. Inferential analysis examined the relationship between financial literacy and financial preparedness for retirement through multivariate analysis, at 95% confidence interval. The F-ratio generated in the Analysis of variance (ANOVA) was used to test overall model statistical significance According to Field (2005), inferential statistics is used to establish the strength and magnitude of the relationships between variables.

## 4.0 Results and Conclusion

### 4.1. Response Rate

A response rate of 78.65% was achieved. According to Hart (1987) response rate in business survey vary from 17 percent to 60 percent with an average of 36 percent, However, Mendenhall *et al.*, (2003) and Nachmias and Nachmias (2004) observed that a response rate of 50 percent in a survey is adequate. The response rate of this study of 78.65% is therefore considered adequate as it was above the 36% and 50%.

### 4.2. Descriptive Statistics

This section presents the descriptive statistics of number of observations, minimum, maximum, mean and standard deviations of responses on knowledge of financial instruments, computation capability of retirement benefits, dimensions of demographic characteristics, financial factors and savings and asset acquisitions which proxy financial preparedness for retirement in the study.

#### 4.2.1. Knowledge of financial instruments

The respondents were asked in a five point likert questions to indicate their knowledge of financial products and services. The effect of knowledge on financial instruments was analyzed using the descriptive statistics where the results of the analysis are discussed and as well provided in table 4.12.

**Table 4.12: Knowledge of financial instruments results**

Knowledge of financial instruments	N	MinMax	Mean	Std.Dev
Investment in stocks, bonds /mutual funds	3021.00	5.00	2.9106	1.23162
Calculation of interest on investment	3021.00	5.00	3.3609	1.31141
Understanding investment options for pension schemes	3021.00	5.00	3.3709	1.06041
Knowledge about Investment	3021.00	5.00	3.6291	1.39346
Investment in ordinary shares to treasury bills	3021.00	5.00	3.8709	1.24421
Purchase of wide range of stocks and shares	3021.00	5.00	3.9503	1.17597
financial knowledge usage to make personal financial decisions	3023.00	5.00	4.3974	.74779
<b>Aggregate mean and standard deviation</b>			<b>3.6414</b>	<b>1.1664</b>

A mean response of <1 implies not at all, 1.1 to 2 implies to a less extent, 2.1 to 3 implies moderate extent, 3.1 to 4 implies a large extent and 4.1 to 5 implies very large extent. As inferred from table 4.12, the respondents use financial knowledge to a very large extent to make personal financial decisions (mean of 4.39). To a large extent, the respondents indicate that they buy a wide range of stocks (mean of 3.95), know that ordinary shares yield more than fixed income instruments (mean of 3.87), know about investments (mean of 3.63), understand investment options for pension schemes (mean of 3.37) and know how to calculate interest on investments (mean of 3.36). The respondents indicated that they invest in stocks, bonds or mutual funds to a moderate extent (mean of 2.91).

#### 4.2.2. Computation capability of retirement benefits

The respondents were asked in a five point likert questions to indicate their ability to compute their retirement benefits and the responses indicated in table 4.13.

**Table 4.13: Computation capability results**

Computation capability	N	MinMax	Mean	Std.Dev
Saving enough each month	3021.00	5.00	2.3278	1.03838
Knowledge of how much is needed at retirement	3021.00	5.00	2.4967	1.51130
Knowledge of how much to save monthly to retire comfortably	3021.00	5.00	2.7351	1.40338
Calculations done to estimate savings for retirement	3021.00	5.00	3.3609	1.71921
Calculations of benefits due on retirement	3021.00	5.00	3.5960	1.52359
<b>Aggregate mean and std deviation</b>			<b>2.9033</b>	<b>1.4392</b>

A mean response of <1 implies not at all, 1.1 to 2 implies to a less extent, 2.1 to 3 implies moderate extent, 3.1 to 4 implies a large extent and 4.1 to 5 implies very large extent. As presented in the table 4.12, the respondents indicated that to a moderate extent, they are able to calculate the benefits due on retirement (mean of 3.59) and they have calculated how much money they need to save for retirement (mean of 3.36). To a less extent, the respondents opine that they know how much money they have to save every month in order to retire comfortably (mean of 2.74), know how much money they will need on retirement (mean of 2.49) and saving enough each month to retire comfortably (mean of 2.33). The aggregate mean score for computation capability of retirement benefits is 2.90 which suggest that the variable was rated at the level of moderate extent and the aggregate standard deviation 1.44 for computation capability for retirement benefits is low confirming that respondents generally agreed that to a less extent that computation capability for retirement is crucial for financial literacy and financial preparedness for retirement.

### 4.3. Inferential analysis

Knowledge of financial instruments and computation capability of the retirement benefits (independent variables) were regressed against on financial preparedness for retirement as shown in table 4.19.

**Table 4.19(a) Knowledge and computation of retirement benefits vs financial preparedness for retirement. Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficientst	Sig.
	B	Std. Error	Beta	
(Constant)	1.624	.045		.000
1 Knowledge	.002	.014	.008	.892
Computation	.091	.011	.491	.000

**Table 4.19 (b): Model summary for table 4.19(a)**

#### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.495 <sup>a</sup>	.245	.240	.16321	1.821

Predictors: (Constant), Computation, Knowledge

**Dependent Variable: FPR**

**Table 4.19 (c): ANOVA results for table 4.19(a)**

#### ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.582	2	1.291	48.467	.000 <sup>b</sup>
	Residual	7.964	299	.027		
	Total	10.546	301			

a. Dependent Variable: FPR

b. Predictors: (Constant), Computation, Knowledge

**Source: Research data (2015)**

Table 4.19 shows the regression model estimated to establish the strength and the direction of the relationships between knowledge of financial instruments, computation capability and financial preparedness for retirement which is presented in the model;  $FPR=1.624 + 0.002 FK + 0.091 CRB$ . This regression analysis shows that the adjusted coefficient of multiple determinant = 0.240 which implied that financial literacy explains 24% of the variation on financial preparedness for retirement and the value is very close to  $R^2$  anticipating minimal shrinkage based on the indicator. The regression model was also observed to have a good fit of the model as it was significant at  $F(2,299) = 48.467$ , P-value 0.001. Other than this, the regression analysis also revealed that holding financial literacy to constant zero, financial preparedness for retirement would be 1.624. The study examined if there was a significant relationship between the dependent and the independent variables while testing hypothesis one and two.

The second objective was to analyze the effect of computation capability of retirement benefits on financial preparedness. The regression model estimated on table 4.20 shows that there was a significant effect of computation capability of the retirement benefits on financial preparedness for retirement. Computation capability of retirement benefits is established to be statistically significant at ( $\beta= 0.091$ ,  $t= 8.608$   $P = 0.0001$ ) at 95% level of confidence. The model also shows a positive effect of computation capability of retirement benefits on financial preparedness for retirement. The findings infer that an increase of 0.091 in financial preparedness for retirement is attributed to a unit increase in computation capability. Since the relationship is statistically significant, the researcher therefore rejects the null hypothesis and proposes that computation capability of retirements benefits has an effect on financial preparedness for retirement. The study findings on this relationship is consistent with the findings of Lusardi and Mittchel (2005) and Roij, Lusardi and Alessie (2011) propositions that financial knowledge exhibited by computation ability of basic financial mathematics has a strong and positive association with retirement planning. This finding shows the need for organizations to introduce for their specific employees training on retirement annuities computation and the factors that influence the annuities.

**Table 4.20 (a): Relationship between dependent and independent variables (Step1)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1.593	.045		35.591	.000
Literacy	.090	.013	.372	6.943	.000

**Table 4.20(b): Model Summary of table 20 (a)**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.372 <sup>a</sup>	.138	.136	.17403	1.741

a. Predictors: (Constant), Literacy

**Table 4.20 (c): ANOVA results for table 20(a)**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.460	1	1.460	48.208	.000 <sup>b</sup>
	Residual	9.086	300	.030		
	Total	10.546	301			

a. Dependent Variable: FPR

b. Predictors: (Constant), Literacy

Table 4.20 showed an adjusted coefficient of determination of 0.136; the value is very close to  $R^2$  anticipating minimal shrinkage based on the indicator. The regression model is statistically significant at  $F(1,300) = 48.208$  and P value of 0.000, thus the proposed model fitted the data well. In addition, financial literacy explains that 13.6% of the variations by a linear model in financial preparedness for retirement at 95% level of confidence.



The ANOVA also gave a calculated probability of 0.001 which is below the threshold of 0.05 depicting the idealness of the data in drawing inferences and making conclusion on the population’s parameters which also indicated strong evidence against the null hypothesis. **FPR= 1.593+0.090FL**. The regression model estimated above established that financial literacy is statistically significant at  $\beta=0.090$ ;  $t=6.943$ ;  $p=0.001$ . This confirms the need for moderation following the reason that relationship between financial literacy and financial preparedness for retirement is significant at 95% level of confidence. More so, the model showed that having financial literacy to constant zero, financial preparedness for retirement would be 1.593 and in addition to that, a unit increase in financial literacy leads to an increase of 0.090 in financial preparedness for retirement. The second step as shown in the table 4.21 involved a regression of the dimensions of the demographic characteristics as explanatory variables of financial preparedness for retirement. This was intended to check if demographic dimensions are explanatory variables or not. The regression analysis yielded the results as shown on the table 4.21.

**Table 4.21 (a): Relationship between moderator and dependent variable (Step 2)**

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.824	.138		5.962	.000
Gender	.071	.023	.158	3.044	.003
Age	.076	.010	.472	7.888	.000
1 Marital status	.086	.030	.191	2.908	.004
Education	.160	.035	.311	4.605	.000
Income	.041	.020	.212	2.093	.037
Dependants	-.034	.007	-.446	-4.683	.000

**Table 4.21 (b): Model Summary of table 4.21(a)**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.603 <sup>a</sup>	.364	.351	.15077	2.373

a. Predictors: (Constant), Dependants, Education, Gender, Age, Marital status, Income

b. Dependent Variable: FPR

**Table 4.21 (c): ANOVA of table 4.21(a)**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.840	6	.640	28.157	.000 <sup>b</sup>
	Residual	6.706	295	.023		
	Total	10.546	301			

a. Dependent Variable: FPR

b. Predictors: (Constant), Dependants, Education, Gender, Age, Marital status, Income

$$\text{FPR} = 0.824 + 0.071\text{Gender} + 0.076\text{Age} + 0.086\text{Marital status} + 0.160\text{Education} + 0.041\text{Income} - 0.034\text{Dependants}$$

The table 4.21 showed that the regression model without moderation is statistically significant at  $F(6,295) = 28.157$  with calculated probability of 0.000. As presented in table 4.18, all the demographic attributes are statistically significant in their relationship with financial preparedness for retirement. Gender ( $\beta=0.071$ ,  $t=3.044$ ,  $p=0.003$ ), Age ( $\beta=0.076$ ,  $t=7.888$ ,  $p=0.000$ ), Marital status ( $\beta=0.086$ ,  $t=2.908$ ,  $p=0.004$ ), Education ( $\beta=0.160$ ,  $t=4.605$ ,  $p=0.000$ ) and Income ( $\beta=0.041$ ,  $t=2.093$ ,  $p=0.037$ ) have a positive effect on financial preparedness for retirement. Number of dependants ( $\beta=-0.034$ ,  $t=-4.683$ ,  $p=0.000$ ) has a negative effect on financial preparedness for retirement.

These findings confirm earlier findings by Kim, Kwon and Anderson (2005) and Stawski, Hershey and Lawson (2007) writings which suggested that household income is statistically significant and positively influence financial preparedness for retirement.

The findings are a departure from the propositions by Kim, Kwon and Anderson (2005) that age, gender and marital status are statistically insignificant in the relationship with financial preparedness for retirement. In the third step, the moderation is captured by estimating a multiple regression model incorporating the demographic characteristics, financial literacy and financial preparedness for retirement in table 4.22.

**Table 4.22 (a): Relationship between Independent, Moderator and Dependent variables**

<b>Coefficients<sup>a</sup></b>					
<b>Model</b>	<b>Unstandardized Coefficients</b>		<b>Standardized Coefficients</b>	<b>t</b>	<b>Sig.</b>
	<b>B</b>	<b>Std. Error</b>	<b>Beta</b>		
(Constant)	.480	.106		4.548	.000
Literacy	.188	.012	.773	15.332	.000
Gender	.092	.017	.206	5.290	.000
Age	.164	.009	1.011	17.785	.000
Marital status	.112	.022	.249	5.055	.000
Education	.069	.027	.135	2.598	.010
Income	-.056	.016	-.291	-3.535	.000
Dependants	-.029	.005	-.391	-5.489	.000

**Table 4.22 (b): Model Summary table 4.22(a)**

<b>Model Summary<sup>b</sup></b>					
<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. Error of the Estimate</b>	<b>Durbin-Watson</b>
1	.804 <sup>a</sup>	.647	.638	.11259	1.880

a. Predictors: (Constant), Dependants, Education, Gender, Literacy, Marital status, Age, Income

b. Dependent Variable: FPR

**Table 4.22 (c): ANOVA of table 4.22(a)**

<b>ANOVA<sup>a</sup></b>						
<b>Model</b>		<b>Sum of Squares</b>	<b>df</b>	<b>Mean Square</b>	<b>F</b>	<b>Sig.</b>
1	Regression	6.820	7	.974	76.862	.000 <sup>b</sup>
	Residual	3.727	294	.013		
	Total	10.546	301			

a. Dependent Variable: FPR

b. Predictors: (Constant), Dependants, Education, Gender, Literacy, Marital status, Age, Income

**FPR = 0.480 + 0.188FL + 0.092Gender + 0.164Age + 0.112Marital Status + 0.069Education - 0.056Income - 0.029Dependants .....Model 3.5**

The regression results reveal that at 95% level of confidence, all the coefficients are statistically significant. Financial literacy ( $\beta=0.188$ ;  $t=15.332$ ;  $p= 0.000$ ), Gender ( $\beta=0.092$ ;  $t=5.290$ ;  $p= 0.000$ ), Age ( $\beta=0.164$ ;  $t=17.785$ ;  $p= 0.000$ ), Marital status ( $\beta=0.112$ ;  $t=5.055$ ;  $p= 0.000$ ) and Education ( $\beta=0.069$ ;  $t=2.598$ ;  $p= 0.010$ ) positively relate with financial preparedness for retirement. Income ( $\beta=-0.056$ ;  $t=-3.535$ ;  $p=0.000$ ) and number of dependants ( $\beta=-0.029$ ;  $t=-5.489$ ;  $p= 0.000$ ) negatively relate with financial preparedness for retirement.

The fourth specific objective sought to establish the moderating effect of financial factors on the relationship between financial literacy and financial preparedness for retirement Thus financial literacy was regressed on financial preparedness for retirement. The first step showed in the table 4.24 estimated the base model to determine the relationship between the dependent and the independent variable.

**Table 4.24 (a): relationship between dependent and independent variables (Step1)**

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.593	.045		35.591	.000
	Literacy	.090	.013	.372	6.943	.000

**Table 4.24 (b):Model Summary table 4.24(a)**

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.372 <sup>a</sup>	.138	.136	.17403	1.741

a. Predictors: (Constant), Literacy

**Dependent Variable: FPR**

**Table 4.24 (c): ANOVA of table 4.24(a)**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.460	1	1.460	48.208	.000 <sup>b</sup>
	Residual	9.086	300	.030		
	Total	10.546	301			

a. Dependent Variable: FPR

b. Predictors: (Constant), Literacy

**FPR= 1.593+0.090FL.....Model 3.3**

The regression results revealed that financial literacy ( $\beta=0.090$ ;  $t=6.943$ ;  $p= 0.000$ ) is statistically significant at at 95% level of confidence. The model shows a positive relationship between financial literacy and financial preparedness for retirement. The analysis establishes that 13.6% of variations in financial preparedness for retirement is explained by variations in financial literacy.

**5.0. Conclusion**

**5.1 Summary of the Findings**

The study foremost sought to analyze the effect of financial literacy on financial preparedness for retirement among the respondents. The multiple regression analysis results indicated that variations in financial literacy explain 24% of the variations on financial preparedness for retirement. The first specific objective sought to determine the effect of knowledge of financial instrument on financial preparedness for retirement. The multiple regression analysis results show that there was no significant effect of knowledge of financial instrument on financial preparedness for retirement ( $\beta = 0.002$ ,  $t= 0.136$   $P = 0.892$ ) at 5% level of significance. The study finding also suggests that for a unit increase in knowledge of financial instruments, financial preparedness for retirement increases by 0.002. Taking cognizance of the levels of significance, the study fails to reject the null hypothesis that knowledge of financial instruments has no effect on financial preparedness for retirement. The second specific objective was to analyze the effect of computation capability of retirement benefits on financial preparedness for retirement amongst the respondents. The multiple regression results showed that there was a statistically significant positive effect of computation capability of retirement benefits on financial preparedness for retirement ( $\beta= 0.091$ ,  $t= 8.608$   $P = 0.0001$ ). This finding infers that an increase of 0.091 in financial preparedness for retirement is attributed to a unit increase in computation capability. Since the relationship is statistically significant, the researcher therefore rejects the null hypothesis that computation capability of retirement benefits does not affect financial preparedness for retirement among the respondents. In the third objective, the study sought to establish the moderating effect of demographic characteristics on the relationship between financial literacy and financial preparedness for retirement. The null hypothesis proposed in the study that dimensions of demographic characteristics have no moderating effect on the relationship between financial literacy and financial preparedness for retirement was tested using the three step causal approach suggested by Muller, Judd and Yzerbyt (2005), and Hayes (2009).

Foremost for the third objective, financial literacy was regressed on financial preparedness for retirement. The regression model finds that variations in financial literacy explain 13.6% of the variations in financial preparedness for retirement and a unit increase in financial literacy leads to an increase of 0.090 in financial preparedness for retirement. The regression model shows that there is a statistically significant positive effect of financial literacy on financial preparedness for retirement ( $\beta=0.090$ ;  $t=6.943$ ;  $p=0.001$ ). In the second step for the third objective, the dimensions of the demographic characteristics as explanatory variables are regressed on financial preparedness for retirement. The regression model is statistically significant and shows that 35.1% of variations in financial preparedness for retirement are explained by variations in the demographic dimensions. The study finds statistically significant positive relationships between financial preparedness for retirement and gender ( $\beta=0.071$ ;  $t=3.044$ ;  $p=0.003$ ), age ( $\beta=0.076$ ;  $t=7.888$ ;  $p=0.000$ ), marital status ( $\beta=0.086$ ;  $t=2.908$ ;  $p=0.004$ ), education ( $\beta=0.160$ ;  $t=4.605$ ;  $p=0.000$ ) and income ( $\beta=0.041$ ;  $t=2.093$ ;  $p=0.037$ ). There is also established a statistically significant negative relationship between dependants ( $\beta=-0.034$ ;  $t=-4.683$ ;  $p=0.000$ ) and financial preparedness for retirement. The study established that the regression model is statistically significant at  $F(6,295)=28.157$  with calculated probability of 0.000 without the moderation.

In the third step for the third objective, the moderation is captured by estimating a multiple regression model incorporating financial literacy and the demographic dimensions. The estimated regression model is statistically significant and shows that 64.7% of variations in financial preparedness for retirement are explained by variations in financial literacy and demographic dimensions. The model shows statistically significant positive relationships between financial preparedness for retirement and financial literacy ( $\beta=0.188$ ;  $t=15.332$ ;  $p=0.000$ ), Gender ( $\beta=0.092$ ;  $t=5.290$ ;  $p=0.000$ ), Age ( $\beta=0.164$ ;  $t=17.785$ ;  $p=0.000$ ), Marital status ( $\beta=0.112$ ;  $t=5.055$ ;  $p=0.000$ ) and education ( $\beta=0.069$ ;  $t=2.598$ ;  $p=0.010$ ). There are also statistically significant negative relationships between financial preparedness for retirement and family income ( $\beta=-0.056$ ;  $t=-3.535$ ;  $p=0.000$ ) and financial dependants ( $\beta=-0.029$ ;  $t=-5.489$ ;  $p=0.000$ ). Since the relationships are statistically significant and there is a significant change in the explanatory ability of the model, the researcher therefore rejects the null hypothesis that dimensions of demographic characteristics does not moderate the relationship between financial literacy and financial preparedness for retirement among permanent and pensionable employees in state owned corporations in Kenya.

The fourth specific objective was to establish the moderating effect of financial factors on the relationship between financial literacy and financial preparedness for retirement. The three step causal approach suggested by Muller, Judd and Yzerbyt (2005), and Hayes (2009) is applied to test the null hypothesis that financial factors has no moderating effect on the relationship between financial literacy and financial preparedness for retirement. In the first step, financial literacy was regressed on financial preparedness for retirement. The model established a statistically significant positive relationship between financial literacy ( $\beta=0.090$ ;  $t=6.943$ ;  $p=0.000$ ) and financial preparedness for retirement. The regression model suggests that 13.8% of variations in financial preparedness for retirement are explained by variations in financial literacy. In the second step, financial factors as explanatory variables are regressed against financial preparedness for retirement to ascertain their significance as explanatory variables. The estimated regression model without moderation is established to be statistically significant at  $F(1,300)=8.257$  with calculated probability of 0.004. The model suggests that 2.7% of variations in financial preparedness for retirement are explained by financial factors. The model suggests a statistically significant negative relationship between financial factors ( $\beta=-0.072$ ;  $t=-2.874$ ;  $p=0.000$ ) and financial preparedness for retirement.

In the third step, the moderation effect of financial factors on the relationship between financial literacy and financial preparedness for retirement is captured in a multiple regression model. The model suggests that 16.1% of variations in financial preparedness for retirement are explained by variations in financial literacy and financial factors. The regression analysis yielded a statistically significant negative relationship between financial factors ( $\beta=-0.067$ ;  $t=-2.865$ ;  $p=0.004$ ) and financial preparedness for retirement and a statistically significant positive relationship between financial literacy ( $\beta=0.089$ ;  $t=6.930$ ;  $p=0.000$ ) and financial preparedness for retirement. Since the relationships are statistically significant and there is a significant change in the explanatory ability of the model, the researcher therefore rejects the null hypothesis that financial factors does not moderate the relationship between financial literacy and financial preparedness for retirement among permanent and pensionable employees in state owned corporations in Kenya.

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