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Effects of Demographic Factors on Value of Investments of Teachers in Kisii County, Kenya

Mary Bosire[1*] George Owuor[2] Irene Asienga[3] Fredrick Kalui[1]
1.Department of Accounting, Finance and Management Science, Faculty of Commerce, Egerton University. P. O. Box 536 - 20115, Egerton, Njoro, Kenya
2.Department of Agricultural Economics and Agribusiness Management, Egerton University. P. O. Box 536 – 20115, Egerton, Njoro, Kenya
3.Commission on Revenue Allocation. P. O. Box 1310-00200: Nairobi Kenya

Abstract
The focus of this study was to examine how teachers' demographic characteristics affect the value of their investment. The study anchored much on the behavioral finance theory which explains how people's financial behavior is subject to personality traits, demographic and socioeconomic factors, religion, household characteristics, cognitive and emotional biases. Specifically, the study examined the effect of demographic factors on the value of investments in financial assets, value of investments in non financial assets and on aggregate investment value. The study hypothesized that demographic characteristics of the teachers such as age, gender, marital status, education, religion, length of service, number of dependants, income and financial training do not affect the value of their investments. Primary data was collected from a sample of 313 randomly selected secondary school teachers from Kisii County in Kenya. An ordered logistic regression was used to test three formulated hypotheses. At 5% significance level, the three hypotheses failed to be accepted and conclusions made that there are demographic characteristics of teachers that influence the value of their investments. The findings showed that age, gender and income were significant factors and all had a positive effect on the value of investments in financial assets. Again, gender and income were found to have a positive significant effect on investment value in non financial assets as well as on aggregate investment value. The other factors like marital status, number of dependants, financial training, education, length of service and religion were found to be insignificant. The findings from this study are contributes to providing a better understanding of how investors demographic characteristics impact on their investments in order to make better investment decisions.
Keywords: Demographic factors, investment value,

1. Introduction

Demographic profiles of investors are among the decision influencing factors when making investments. Behavioral finance theory explains people's behavior in financial settings and more specifically how individuals make investment decisions that are subject to their behavioral characteristics (DeBondt & Thaler, 1995; Barberis & Thaler,2003; Shiller, 2003; Sewel, 2007; Mionel, 2012). Personality traits, demographic and socioeconomic factors, household characteristics, religion, cognitive and emotional biases have been proved to affect financial and investment decisions (Thaler, 2005; Sunitha, 2012). The behavioral finance theory concepts formed the underlying argument that teachers' financial and investment decisions are also expected to be subject to their behavioral characteristics. Research findings have related investor demographic characteristics to investment behavior (Jain & Mandot, 2012; Nguyen & Schubler, 2012; Jamshidinavid, Chavoshani & Amiri, 2012; Geetha & Ramesh, 2011; Sadiq & Ishaq, 2014; Bhavani & Shetty, 2017). Among these demographic factors are age, gender, education, occupation, income, financial literacy and marital status which have been found to plays a very important role in investment decisions.

Although a number of studies have been done in Kenya on the relationship between demographic characteristics and investor behavior, most of these studies have focused on investors in the Nairobi Securities Exchange (Waweru, Munyoki, & Uliana, 2008; Onsomu, 2014; Waruingi, 2011). There is limited documentation of study findings using samples drawn from outside the financial market investors, making this area to still remain underexplored. This study sampled teachers as individual investors drawn from outside the securities exchange to analyze the effect of their demographic characteristics on the value of their investments

1.2 Statement of the Problem

While a number of research findings have linked demographic factors to investor decisions and behavior, findings from these studies have shown contradictory outcomes implying that different demographic factors affect investment behavior or decisions differently depending on sample characteristics and regional orientations. For instance, Jain and Mandot (2012) in their study on the impact of demographic factors on investment decisions by investors in India found a negative correlation between investors investment decisions and their Marital Status, Gender, Age, Educational and Occupation while income had a positive correlation. However, in

a study by Sadiq and Ishad (2014) on the effect of demographic factors on investor behavior when making investment choices in Pakistan found out that gender, marital status, family size and occupation had no effect on investor behavior. In another related study by Nguyen and Schubler (2012) on investment decisions and socio-demographic characteristics among individual investors in German, showed that education was the best predictor of investor behavior.

Panda and Panda (2013) in a study on the relationship between demographic factors and investments, found that a few demographic variables such as family size, annual income and annual savings had significant relationship with investment while other demographic variables such as gender, age, education and occupation did not have significant relations with the investments made by the investors. While the findings from the study found that gender had no effect, another related study by Bhatt et al. (2013) had actually found that female are more conservative while investing compared to males who are aggressive. However, Bhatt et al. (2013) did not find a significant relationship between the Marital Status and the investment choice made by the investor. Bhavani and Shetty (2017) investigated how investment choice is affected by the demographic characteristics and perceptions of investors in Dubai and found out that only age, gender, education and occupation were significant factors. Lachhwani and Chaurasia (2015) examined the effect of demographic factors on investment decisions of people in Kutch District in India and found out that in addition to gender, age, marital status and occupation, income also had a significant effect. In light of these different outcomes from the different samples from different regions, this study sought to examine how demographic factors affect the value of investments by using a sample drawn from Kenya and focused on teachers as investors with unique characteristics.

1.3 Objectives of the Study

i) To determine the effect of demographic factors on investment value in financial assets
ii) To determine the effect of demographic factors on investment value in non financial assets
iii) To determine the effect of demographic factors on aggregate investment value

2. Reviewed Literature

Different factors have been found to affect investors' behaviour during their personal financial management process. Among these factors are investors demographic profiles (Chitra & Jayashree, 2012; Altman, 2006; Lan, Xiong, He and Ma, 2017). Behavioral finance theorists argues that investors' personality traits, demographic and socioeconomic factors are believed to influence peoples financial and investment decisions (Debondt & Thaler, 1995; Barberis & Thaler,2003; Shiller, 2003; Sewel, 2007; Mionel, 2012). Behavioral theorists have identified common human characteristics that shape financial behaviour which include lack of self control, limited cognitive abilities and inertia, For instance, lack of self control has been linked to people overspending while saving and investing less (Altman, 2006) .

2.1 Demographic Factors and Investment

From a finance perspective, investment refers buying financial products or any valued item/s with the anticipation that positive returns will be received at a future period (Body, Kane & Marcus, 2009). Finance professionals explain investment as money utilized for buying assets or putting money into an activity/s with the expectation of gain that upon analysis has a high degree of value and security for the principle amount, as well as security of return, within an expected period of time (Pandey, 2012). Investment involves decision making which relates to the type, mix, amount, timing and grading of investment. This is to ensure security of both the principle amount and the return on investment within an expected period of time (Reilly & Brown, 2006). Based on the arguments propagated by the behavioral finance theorists, demographic factors are believed to influence investment decisions (Debondt & Thaler, 1995; Barberis & Thaler,2003; Shiller, 2003; Sewel, 2007; Mionel, 2012). However, different studies have evidenced variations in outcomes based on different samples and regional orientations.

Asnake, Tsega and Gedifew (2015) in a study on the influence of demographic factors on savings and investment decisions of high school teachers in Ethiopia found out that gender, age, family size and social expenses significantly influenced savings and investment decisions of the teachers. Male teachers were found to have better savings and investment habits compared to their female counterparts. From the findings, teachers with bigger family were found to save and invest more. Age and social expenses were found to have a negative significant influence on savings and investment. Older teachers were found to decrease their savings and investment while higher social expenses were found to decrease savings and investment.

Lan, Xiong et al.,(2017) in a study on the predictability of investment behavior based on personal characteristics of individual investors in China found out that knowledge levels, investment experience and income levels had the most significant predictability on investment behavior. A logistic model on investor behavior and personal characteristics was applied and passed the significance tests suggesting personal characteristics and investment behavior had strong connections. The study considered a variety of investments

and constructed investment scales or levels that were considered against the personal characteristics. The study conclusions was that investors personal characteristics were strong predictors of their investment behavior

Geetha & M. Ramesh (2012) conducted a study on relevance of demographic factors in investment decisions .This study attempted to find out the significance of demographic factors such as gender, age, education, occupation, income, savings and family size over several elements of investment decisions like priorities based on characteristics of investments, period of investment, reach of information source, frequency of investment and analytical abilities. The study was made by conducting a survey in Nagapattinam district of Tamilnadu, India. The study found out that the demographic factors have a significant influence over some of the investment decision elements and insignificant in others elements too. The study also disclosed a general view of investor's perception over various investment avenues

Parashar (2010) in a study on investor demographic characteristics and investment found out that investment choice depended upon the investors' demographic variables like gender, age, income, education, occupation as well as their personality traits. Female were less risk averse and thus they preferred safer investment options while males were found to be more interested in real estate. Young people of less than 25 yrs were also reported to take more risk and invested in equity shares whereas older people tended to invest in less risky assets.

Research that has been conducted on the effect of demographic factors on investment decision have shown contradictory results between different samples and countries (Jain & Mandot, 2012; Nguyen & Schubler, 2012; Jamshidinavid et. al., 2012; Geetha & Ramesh, 2011; Sadiq & Ishaq, 2014; Lachhwani & Chaurasia, 2015; Bhavani & Shetty, 2017). Some of the demographic factors like age, gender, marital status, family size, education, income, and occupation have been found to negatively or positively influence investment decisions. While these study findings have linked demographic characteristics to investment behavior, the variations in outcomes where different factors are found to have no effect or different effects on investment behavior in some samples and not in others creates research gaps

3. Methodology

This study was descriptive in nature and it aimed at describing and documenting aspects of teachers' demographic and investment characteristics as they were. Data was collected and analyzed for purposes of fact finding and the formulation of important principles of knowledge and solutions (Orodho, 2003) relating to investment. Primary data was obtained using a questionnaire from a sample of 313 public secondary school teachers in Kisii County; Kenya. The questionnaire included response items on the teachers' demographic characteristics like age, gender, marital status, religion, education levels, income, number of dependants, length of service and financial training. These were the predictor variables to investment value. Data was also collected on the type of investments owned and their estimated value. Investments that were inherited were not considered since it was not possible to link them directly to the investor decisions and characteristics. The dependent variable was investment value which was operationalised from the estimated value of the investments where higher values signified higher level investment and lower value signified low level investment

3.1 Data Analysis

To determine the effect of demographic characteristics on investment value levels, an ordered logistic regression was used. Each of the investment classes; investment in financial assets (Y_{FA}) and investment in Non financial assets (Y_{NFA}) were a function of the nine demographic factors to determine the direction and significance of the effect of these factors on investment value. The demographic factors considered as explanatory variables were; age (X_{Ag}), gender (X_{Gd}), marital status (X_{Ms}), Gross incomes (X_{Gi}), number of dependants (X_{Nd}), length of service (X_{Ls}), education level (X_{El}), financial training (X_{Ft}) and religious affiliation (X_{Ra}). These nine factors were explanatory to each of the investments classes Y_{FA} (investment in financial assets), Y_{NFA} (investment in non financial assets) and Y (aggregate investment)

$$\text{Logit}\,(Y_{invstment}) = \text{Log}\,\frac{P}{1+P} = \beta 0 + \beta 1X_{Ag} + \beta 2X_{Gd} + \beta 3X_{Ms} + \beta 4X_{Gi} + \beta 5X_{Nd} + \beta 6X_{Ls} + \beta 7X_{El} + \beta 8X_{Ft} + \beta 9X_{Ra} + \mathcal{C}$$

This model was used to test the Null hypothesis. The generated output explained the three stipulated hypotheses.

H_O: Demographic factors do not have an effect on investment value in financial assets

H_O: Demographic factors do not have an effect on investment value in non financial assets

H_O: Demographic factors do not have an effect on aggregate investment value

The responses for the dependent variable investment value ranged from 1 (investment value below 200,000) to 5 (investment value of over 3 Million). These responses were transformed and collapsed into three response categories which signified the levels of investment; low value, moderate value and high value investment. These levels in the ordered logit model were characterized as follows:

Low value level: had value score of 0 to 1. ($0 \leq C \leq 1$)

Moderate value level: had value score of 1.1 to 3 ($1.1 \leq C \leq 3$)
High value level: had value score of above 3 ($3.1 \leq C \leq 5$)
In the model the value levels were denoted as; (0) for low value investment; (1) for moderate value and (2) for high value. The categorical data on investment level and the demographic data were entered into the ordered logistic model to test the hypotheses. The results were interpreted after the logistic regression model tests confirmed that the model was statistically significant and hence adequate for use.

4. Descriptive Results

Table 1
Demographic Characteristics of the Respondents.

Gender	Frequency	Percent
Female	103	32.9
Male	210	67.1
Total	**313**	**100.0**
Age	Frequency	Percent
Below 30	49	15.7
30-39 years	109	34.8
40-49 years	108	34.5
50-59 years	46	14.7
60 and above	1	.3
Total	**313**	**100.0**
Marital Status	Frequency	Percent
Single	32	10.2
married	274	87.5
Divorced	3	1.0
Others	4	1.3
Total	**313**	**100.0**
Religious Affiliation	Frequency	Percent
Seventh Day Adventist	158	50.5
Roman Catholic	100	31.9
Protestant	53	16.9
Agnostic	2	.6
Total	**313**	**100.0**
Number of Dependants	Frequency	Percent
None	15	4.8
1-3	95	30.4
4-6	151	48.2
7-9	35	11.2
10-13	11	3.5
14 and above	6	1.9
Total	**313**	**100.0**
Length of Service	Frequency	Percent
Below 3 years	38	12.1
3< 6 years	39	12.5
6<10years	58	18.5
10<14years	54	17.3
14<18 years	43	13.7
18< 22 years	33	10.5
22< 26 years	12	3.8
Above 26 years	36	11.5
Total	**313**	**100.0**

Education Level	Frequency	Percent
Diploma	29	9.3
Bachelor's degree	214	68.4
Masters degree	66	21.1
Other	4	1.3
Total	**313**	**100.0**
Financial Management training	Frequency	Percent
No	243	77.6
Yes	70	22.4
Total	**313**	**100.0**
Gross Income	Frequency	Percent
35,000-65,000	124	39.6
65,001-95,000	118	37.7
95,001-120,000	30	9.6
120,001-160,000	23	7.3
160,001-210,000	14	4.5
210,001-260,000	3	1.0
260,001-365,000	1	.3
Total	**313**	**100.0**

Source: Primary data from Questionnaire Responses

From Table 1, the demographic descriptive indicated that out of the total number of respondents (313), there were more male (67.1%) compared to female. A bigger proportion of them were within the age groups of 30 – 39 years (34.8%) and 40 – 49 years (34.5%). The results indicated that those who were married were 87.5% and over 50% were affiliated to the Seventh Day Adventist denomination. While most of the respondents were degree holders (90%), it was worth noting that a big proportion (77.6%) had not been trained on financial management. The results showed that more of the respondents were within the gross income range of 35,000 to 65,000 (39.6%) and 65,000 to 95,000 (37.7%)

Table 2
Distribution of Responses on Investment in Financial Assets

Type of Investment	(n)	(%)	< 200,000 (%)	>200,000-<500,000 (%)	>500,000-<1.5M (%)	>1.5M-<3 M (%)	> 3 M (%)
Corporate Shares	53	16.9	10.5	4.2	1.9	0	0.3
Cooperative Shares	244	78.0	22.0	36.7	16.0	2.6	0.6
Group Savings	159	50.8	45.7	3.5	2.0	0.6	0.3
Bank Deposits	235	74.6	57.2	13.1	2.2	1.0	0.3
Mutual Funds	24	7.7	5.1	1.3	0.3	0.3	0
Pension Funds	49	15.7	8.0	3.5	1.9	2.2	0
Bonds	8	2.6	1.9	0	0.6	0	0

Source: Primary data from Questionnaire Responses

Table 3
Distribution of Responses on Investment in Non Financial Assets

Type of Investment	(n)	(%)	<200,000 (%)	>200,000-<500,000 (%)	>500,000-<1.5M (%)	>1.5M-<3 M (%)	>3M (%)
Real Estate	192	60.7	30.7	9.9	10.9	6.1	3.1
Crop Farming	113	36.2	30.4	4.5	1.3	0.0	0.0
Life-stock Farming	111	35.4	31.9	3.2	0.0	0.3	0.0
Poultry	92	29.4	28.1	1.3	0.0	0.0	0.0
Transport	103	29.7	26.2	3.5	0.0	0.0	0.0
Retail Outlets	233	75.0	62.5	9.2	1.8	1.2	0.3

Source: Primary data from Questionnaire Responses

The results in Table 2 and Table 3 indicate choice of investment and the estimated value of the investments

for the teachers. The preferred investments in financial assets include cooperative shares (78%), bank deposits (74.6%) and group savings (50.8%) while the preferred investments in non financial assets included retail businesses (75%) and real estate (60.7%). Markowitz (1991) argues in portfolio theory that investors make investment choices that are financial in nature where their choices depend on how they perceive investments in terms of risk, return and investment management. However, behavioral finance theorists (Debondt & Thaler, 1995; Barberis & Thaler,2003; Shiller, 2003; Sewel, 2007; Mionel, 2012) brings in the behavioral aspects of making financial decisions especially on how they make investment choices. Behavioral finance which integrates the psychological and financial aspects, believe that peoples psychology has an impact on investment theories since it is believed to influence financial decisions including investment decisions. The results on the spread of teachers' investments can be associated with these theoretical presentations. Teachers as investors are human beings with personality traits, demographic and social characteristics that are expected to influence their investment decisions. Research findings have also documented how investor behavior is influenced by many factors at the time of making investment decisions. The demographic profiles and perceptions are believed to play a significant role in selecting particular investments (Jain & Mandot, 2012; Nguyen, 2012; Jamshidinavid et. al., 2012; Geetha & Ramesh, 2011; Sadiq & Ishaq, 2014; Lachhwani & Chaurasia, 2015; Bhavani & Shetty, 2017). .

4.1 Results for Tests of Hypotheses

The study hypothesized that demographic factors do not have statistically significant effect on teachers' investment values. Three models were run. The first model tested for the effect of demographic factors on value of investment in financial assets, the second model tested the effects of demographic factors on the value of investment in non financial assets and the last model tested the effect of demographic factors on aggregate investment. The results of the analysis are presented in Tables 4, 6 and 7.

Table 4
Ordered Logistic Regression on Demographic Factors and Investment in Financial Assets

Investment Financial Assets	Coefficient	Std. Err.	z	P>|z|
Gender	.5055	0.2081	2.43*	0.015
Age	.4970	0.2409	2.06*	0.039
Marital status	.1886	0.2006	0.94	0.347
Religion	-.1099	0.1218	-0.90	0.366
Number dependants	.1201	0.1258	0.95	0.340
Length of service	-.1421	0.0967	-1.47	0.141
Education level	.2554	0.2197	1.16	0.245
Financial training	-.0055	0.2536	-0.02	0.983
Income	.6119	0.0940	6.51*	0.000

Dependent Variable; Investment in Financial Assets
**Significant at 5% significance level; Wald chi2(9) = 85.31 Prob > chi2 = 0.0000*
Number of obs = 313 Pseudo R2 = 0.0594

The results in Table 4 show that the Likelihood Ratio chi- square LR chi2 (9) was 85.31 with a p-value < 0.05 which was an indication that the model was statistically significant and adequate for use. From the logit coefficients, the results showed that there were three factors that significantly influenced teachers' investment value level in financial assets. These were gender, age and income. The logit coefficients for all the three factors were positive which implied they positively influenced teachers' investment value levels. For age, the coefficient was (0.497) with a p-value = 0.039. This implied that the older the teacher the more likely they were to hold higher value investment in financial assets compared to younger teachers. The coefficient for gross income was also a positive (0.612) with a p-value = 0.000. This implied that teachers with higher incomes were the ones more likely to hold higher value investment in financial assets. The coefficient for gender was a positive (0.506) with a p-value = 0.015 and this was for male. The interpretation was that male teachers were found to be more likely to invest more in financial assets. The study had hypothesized that demographic factors do not have a significant effect on the level of investment in financial assets. From the results in Table 4, and at 5% significance level the hypothesis failed to be accepted and hence the alternative was accepted since there were demographic characteristics of teachers that were found to have a positive and significant effect on investment value levels in financial assets. These were gender, age and income.

Table 5
Ordered Logistic Regression on Demographic Factors and Investment In Non Financial Assets

Investment in Non Fin Assets	Coefficient	Std. Error	z	P>|z|
Gender	0.8090	0.2358	3.43*	0.001
Age	0.2215	0.2695	0.82	0.411
Marital status	-0.3666	0.2676	-1.37	0.171
Religion	-0.0150	絽← 0.1164	-0.13	0.898
Number dependants	0.1793	0.1173	1.53	0.126
Length of service	-0.1109	0.1245	-0.89	0.373
Education level	0.2370	0.2024	1.17	0.241
Financial training	-0.1180	0.2559	-0.46	0.645
Income	0.7295	0.0926	7.88*	0.000

Dependent Variable; Investment in non financial assets
**Significant at 5% significance level; Wald chi2(9) = 101.11; Prob > chi2 = 0.0000*
Number of obs = 313; Pseudo R2 = 0.0615

The results in table 5 indicates that the Likelihood Ratio chi- square LR chi2 (9) was 101.11 with a p-value < 0.05 which indicated that the model was found to be statistically significant and adequate for use. From the logit coefficients, the results show that two factors positively and significantly influenced teachers' investment in non financial assets. These were gender and income. For income, the coefficient was (0.725) with a p-value = 0.000. This implied that teachers with higher incomes were the ones more likely to hold higher value investments in non financial assets. The coefficient for gender was a positive (0.809) with a p-value = 0.001 which was for male. The interpretation of this result was that male teachers were found to be more likely to own higher value investments. The study had hypothesized that demographic factors do not have a significant effect on teachers' investment levels in non financial assets. Based on the results in Table 5, and at 5% significance level, the hypothesis failed to be accepted and hence the alternative was accepted that there are demographic factors that influence levels of investment by teachers in non financial assets. These factors were gender and income.

Table 6
Ordered Logit Results for the Effect of Demographic Factors on Aggregate Investment

Investment	Coef.	Std. Err.	z	P>|z|
Gender	0.6708	0.2159	3.11*	0.002
Age	0.4460	0.2411	1.85	0.064
Marital status	0.0011	0.2091	0.01	0.996
Religion	-0.1029	0.1211	-0.85	0.395
Number dependants	0.1653	0.1243	1.33	0.183
Length of service	-0.1385	0.1014	-1.37	0.172
Education level	0.1995	0.2295	0.87	0.385
Financial training	0.0877	0.2484	0.35	0.724
Income	0.7301	0.0889	8.21*	0.000

Dependent Variable; Investment
**Significant at 5% significance level; Wald chi2(9) = 122.32; Prob > chi2 = 0.0000*
Number of obs = 313; Pseudo R2 = 0.0411

The results in table 6 show that the Likelihood Ratio chi- square LR chi2 (9) was 122.32 with a p-value < 0.05 which indicated that the model was found to be statistically significant and adequate for use. From the logit coefficients, the results show that two factors positively and significantly influenced teachers' investment. These were gender and income. For income, the coefficient was (0.730) with a p-value = 0.000. This implied that teachers with higher incomes were the ones who were more likely to hold higher value investments. The coefficient for gender was a positive (0.671) with a p-value = 0.002 which was for male. The interpretation of this result was that male teachers were found to be the ones more likely to own higher value investments. At 5% significance level, hypothesis three also failed to be accepted and the alternative was accepted since gender and income were found to have a significant positive influence on levels of investment by teachers.

4.2 Discussion of Results

Understanding concepts of investment decisions and investment management has gained a lot of interest from researchers, financial service providers, financial educators, advisors and planners. This study sought to find out how demographic characteristics of teachers affect their investment value levels. The findings from this study have indicated that gender, age and income are significant and positively influence investment value in financial assets while gender and income have a significant and positive effect on investment values in non financial assets and aggregate investment. While on one hand these findings contradict those from some other related

studies, on the other hand they also show consistence with other research findings and theoretical arguments. In general these findings are consistent with the argument in behavioral finance theory that demographic characteristics actually influence investment decisions (DeBondt & Thaler, 1995; Barberis & Thaler,2003; Shiller, 2003; Sewel, 2007; Mionel, 2012). However, not all demographic factors were found to affect investment value.

This study findings are consistent with other on the significant effect of age, gender and income (Lachhwani & Chaurasia, 2015; Bhavani & Shetty, 2015) The other factors like education level, length of service, financial training, religion, marital status and number of dependants were found to have no significant effect on the investment levels of teachers. The result on the effect of age and gender contradict findings from other studies where they found to be insignificant (Panda & Panda, 2013). Gender, marital status and family were found insignificant in a study by Sadiq and Ishaq (2014). A related study by Achar (2012) shows a contradiction in some factors. The findings from the study by Achar (2012) indicated that gender, age and education did not have a significant relationship with investment behavior while in this study gender and age were found to be significant.

4.2.1 Gender

Male teachers with higher incomes were found to be the ones more likely to own higher value investments in both financial assets and non financial assets. The male factor could be attributed to gender differences in risk preferences and attitude (Iman, 2011; Charness & Gneezy, 2012). Charness and Gneezy (2012) found strong evidence for gender differences in risk preference and attitudes. Women are known to have a lower preference for risk compared to men hence invest their financial resources more conservatively. Iman (2011) collaborated these findings in a study that sought to understand the patterns of differences in the risk taking habits of men and women. Results indicated that women significantly differ in their investment behaviour when compared to men. Halko, Kaustia and Alanko (2012) on the relationship between gender and stock holdings in Finland, found that men hold riskier portfolios than women. They found that the strongest predictor of this gender gap is women's higher risk aversion.

These results on gender would also imply that women teachers have lower preferences for risk and significantly differ in their investment behavior compared to men. Further, studies have showed that women are also known to own fewer investment products (Atkinson & Messy, 2012), and have lower levels of wealth as compared to men (Hui, Vincent & Woolley, 2011; Siermiska, Frick & Grabka, 2010). The gender factor was found to significantly influence the perceptions of investors on selection of investment in Dubai (Bhavani & Shetty, 2017). This was similar using a sample in Ethiopia where Asnake et al., (2015) found out that the gender factor influenced savings and investment decisions of high school teachers in where male teachers were found to have better savings and investment habits compared to their female counterparts. Kavita and Prajanna (2017) analyzed the impact of demographic variables and risk tolerance on investment decisions and found out that gender had an impact on investment patterns and decision making of respondents.

4.2.2 Income

The result on the income factor was consistent with other research findings (Lan Q et al., 2017; Achar, 2012) where income levels were found to have a positive significant influence on investment behavior. Income levels reflect the financial strength of investors hence was found to influence investment. It is expected that people with higher incomes are likely to invest more. This expectation is based on the risk preferences where the income level of investors has been proved to influence risk tolerance. People with high incomes or greater wealth tend to take greater risk compared with those with lower incomes (Arano, Parker & Terry, 2002). Investors invest their funds in more volatile portfolios composed of more volatile stocks when they have higher level of income (Barber & Odean , 2001) since higher incomes creates the ability of bearing the losses.

A study by Achar (2012) found out that while characteristics like gender, age and education levels did not have any significant relationship with investment behaviour, incomes significantly influenced investment. Theories have also linked income with investment. The Accelerator Theory of investment argue that when income and consumption increases, investment also increases by a multiple effect since investment is induced by changes in income and consumption (Knox, 1952). The theory argues that the net induced investment will be positive if the national incomes increase. While this may apply at macro or national level, it is relevant at individual level

4.2.3 Age

Old people are believed to have gained investment knowledge and experience over time, and make better investment Choices (Kumar & Korniotis, 2011). In contrast some researchers have found out that increasing age of investors caused decrease in risk tolerance (Jiankopolos & Bernasek 2006) while other researchers have argued that investors age and financial risk tolerance have no significant relationship (Al-Ajmi, 2008; Anbar & Eker, 2010; Gumede, 2009)

The findings from this study on the age factor indicated that it was significant and positively influenced investment values in financial assets only. This implied that older teachers were found to be the ones more likely

to own higher value investments in financial assets which was not the case with investments in non financial assets. This can be explained from the research findings by Jiankopolos and Bernasek (2006) that as teachers grow older, their risk tolerance decreases hence they may not invest in risky investment. They may prefer less risky investments like bank deposits and Mwalimu cooperative shares

The results can also be explained by the nature of these forms of investments. Investing in financial assets is savings in nature. A number of savings instruments are less risky. Also, from the theory the life cycle hypothesis argues that savings increases as people move from youth to middle age (Modigliani and Brumberg 1954). Teachers invest in cooperative shares so that they finance their financial needs through borrowing and the higher the savings the more and higher value loans they can access. At the same time, the older the teacher the more cooperative shares they are likely to own. However, the individual and family financial demands increase as the teacher grows older creating a challenge in investing in physical assets.

5. Conclusion

The purpose of this study was to find out how teachers demographic factors affect their investment value. This study was necessary since effects of investors' demographic factors on their investment decisions and behavior may be overlooked and this may hamper the success of their investments. The findings from this study are important since they contribute to providing a better understanding on how demographic characteristics impact on investment in order to make better investment decisions. From the results, the study established that the gender of the teacher, their age and incomes significantly influence their investment values. Other factors like Education, marital status, religious affiliation, length of service, number of dependants and financial training were found to have no significant influence on their investments. Male teachers were found to be the ones more likely to own higher value investments compared to their female counterparts. The implication from these findings was that the value of female wealth stored in form of investment is low as compared to the male counterparts. This could be explained from the fact that that female have a lower preference for risk hence female teachers are more conservative in their investments ((Iman, 2011; Charness & Gneezy, 2012) and hence significantly differ with the male teachers. While this may be the case, there could be other factors that are a cause of such outcomes.

Teachers with higher incomes were also found to be the ones more likely to own higher value investments. The implication is that higher incomes provide the financial strength to invest more. Incomes sources cab be individuals' salaries or their investments returns that are alternative sources of income. Hence the higher the investment the more the income generated which again leads to higher value investment. Lastly, the study also found out that older teachers were likely to own higher value investments in financial assets. The implication is that as teachers advance in age, investment in financial assets becomes a preferred form of investment where they store their wealth.

5.1 Policy Recommendations

Understanding how investor demographic characteristics affect investment behavior is important in making better investment decisions. This study has established that gender, age and incomes positively affect the values of investments. The study recommends that financial educators and advisors in partnership with the government should develop financial education programmes which focus on female teachers, younger teachers and those with lower incomes to enable them understand the role of demographics when making investments so that they make better investment decisions and improve on investment values

5.2 Recommendations for Further Research

First, the scope of this study was confined to analyzing how demographic characteristics of teachers affected the value of their investment. This means the study was limited to a specific sample drawn from teachers contracted in public secondary schools. This would imply that the findings can only be generalized to secondary school teachers in Kenya. This study could be replicated using a sample from primary school teachers or other public sector employees to provide an opportunity to either validate this study or establish new findings

Secondly, the findings from this study have established that the gender factor significantly affect investment of the teachers where male teachers were found to be the ones likely to own investments with higher value. While the gender risk preference differential has been propagated by other studies, further investigation of this finding using the same sample may be necessary to establish other probable causes that make female not to hold high value investments.

References

Achar, A. (2012). Saving and Investment Behavior of Teachers - An Empirical Study. *International Journal of Physical and Social Sciences,* ISSN: 2249-5894

Al-Ajmi, J. Y. (2008). 'Risk Tolerance of Individual Investors in an Emerging Market'International Research.

Journal of Finance and Economics. Vol. 17, 15-26.
Altman, M. (2010). Prospect theory and behavioral finance. *Behavioral Finance: Investors, Corporations, and Markets*, 191-209.
Anbar, A., & Eker, M. (2010). An empirical investigation for determining of the relation between personal financial risk tolerance and demographic characteristic. *Ege Academy Review*, vol. 10, No,.2, pp 503 - 523
Arano, K., Parker, C., & Terry, R. (2010). Gender‐based risk aversion and retirement asset allocation. *Economic Inquiry*, *48*(1), 147-155.
Atkinson, A. and F. Messy (2012) "Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study", *OECD Working Papers on Finance, Insurance and Private Pensions,* No. 15, OECD Publishing.
Asnake, W. W., Tsega, M. D., & Gedifew, A. W. (2015). The Influence of Demographic Factors on Savings and Investment Decisions of High School Teachers in Ethiopia: A case Study of Wolaita Sodo Town. *International Journal of Advanced Research* 5(12), 1285 - 1296
Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *The quarterly journal of economics*, *116*(1), 261-292.
Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, *1*, 1053-1128.
Bhatt, K. A. & Bhatt, K., (2013). Effects of Investor Occupation and Education on Choice of Investment: An Empirical Study in India, *International Journal of Finance,*Vol. 29, No. 4.
Bhavani, G., & Shetty, K. (2017). Impact of Demographics and Perceptions of Investors on Investment Avenues. *Accounting and Finance Research*, *6*(2), 198.
Bodie Z.,Kane A. and Marcus A. (2009). *Investments* 8thed, McGraw-Hill/Irwin, New York
Charness, G., & Gneezy, U. (2012). Strong evidence for gender differences in risk taking. *Journal of Economic Behavior & Organization*, *83*(1), 50-58.
Chitra, K., and T. Jayashree (2012). "Does Demographic Profile Create a Difference in the Investor Behavior?." *The International Journal of Business & Management* 2, no. 7 (2014): 24.
DeBondt, W.F., Thaler, R. (1995). Financial decision-making in markets and firms: a behavioral perspective.*Handbooks in OR & MS* 9:385–410
Fabozzi, F. J., & Markowitz, H. M. (Eds.). (2011). *The theory and practice of investment management: Asset Allocation, Valuation, Portfolio Construction, and Strategies* (Vol. 198). John Wiley & Sons.
Geetha, N., & Ramesh, D. M. (2011). A Study on People's Preferences in Investment Behavior. *International Journal of Engineering and Management Research.* Vol 1. Issue 6 pp 2249 - 2585
Gumede,V. (2009). 'Demographic Determinants of Financial Risk Tolerance: A South African Perspective', Unpublished B.Com. Hon. Thesis. Pietermaritzburg: University of KwaZulu-Natal.
Halko, M. L., Kaustia, M., & Alanko, E. (2012). The gender effect in risky asset holdings. *Journal of Economic Behavior & Organization*, *83*(1), 66-81.
Hui, T., Vincent, C. and Woolley, F., (2011). Understanding Gender Differences in Retirement Savings Decisions. Ottawa: *Social Research and Demonstration Corporation (SRDC).*
Iman, Z. (2011). Study of Effectiveness models in optimal portfolio of shares. *Middle East Journal Scientific Research, 10*(2), 239-246.
Jain, D. D., & Mandot, M. N. (2012). Impact of Demographic Factors on Investment Decision of Investors in Rajasthan. *Journal of Arts, Science & Commerce,* III (2(3)), 81 – 92
Jamshidinavid, B., Chavoshani, M., & Amiri, S. (2012). The impact of demographic and psychological characteristics on the investment prejudices in Tehran stock Exchange. *European Journal of Business and Social Sciences*, *1*(5), 41-53.
Jianakoplos, N. A. and Bernasek, A. (2006) Financial Risk Taking by Age and Birth Cohort. *Southern Economic Journal*. Vol 72(4), 981-1001.
Kavita C. M. & Prasanna M (2016). Impact of Demographic Variables and Risk Tolerance on Investment Decisions: An Empirical Analysis. *International Journal of Economics and Financial Issues,* 2016, 6(1), 169-175.
Knox, A. D. (1952). The acceleration principle and the theory of investment: a survey *Economica*, *19*(75), 269-297.
Korniotis, G. M., & Kumar, A. (2011). Do older investors make better investment decisions?. *The Review of Economics and Statistics*, *93*(1), 244-265.
Lachhwani, H., & Chaurasia, S. (2015). Effect of Demographic Factors on Investment Decisions & Risk Taking Ability.
Lan, Q., Xiong, Q., He, L., & Ma, C. (2018). Individual investment decision behaviors based on demographic characteristics: Case from China. *PloS one*, *13*(8), e0201916.
Markowitz, H. M. (1991). Foundations of portfolio theory. The Journal of Finance, 46(2), 469 - 477

Mionel, O. (2012). Investors Behaviour between Theory and Practice. *International Journal of Academic Research in Accounting, Finance and Management Sciences,*Volume 2, Special Issue 1:53-56

Modigliani, F., & Brumberg, H. (1954). *Utility analysis and the consumption function: an interpretation of cross-section data, in Kenneth K. Kurihara, ed., Post-Keynesian Economics,* New Brunswick, NJ. Rutgers University Press. Pp 388–436.

Onsomu, Z. N. (2014). The impact of behavioral biases on investor decisions in Kenya: Male vs Female. *International Journal of Research in Humanities, Arts and Literature* 2(6): 87-92

Orodho, A. J. (2003). *Essentials of educational and social science research methods*. Nairobi: Masola Publishers.

Panda, B. N., & Panda, J. K. (2013). A comparative study on relevance of demographic factors in Investment decision: A study on employees of education sector. *Journal for business management, Commerce & Research*, *1*(4).

Parashar, N. (2010). An empirical study on personality variation and investment choice of retail investors. *Journal of Management and Information Technology*, *2*(1), 33-42.

Sadiq, M. N., & Ishaq, H. M. (2014). The Effect of Demographic Factors on the Behaviour of Investors during the Choice of Investments: Evidence from Twin Cities of Pakistan. *Global Journal of Management And Business Research*.

Shiller, R. J. (2003). From efficient markets theory to behavioral finance. *Journal of economic perspectives*, *17*(1), 83-10

Shiller, R. J. (2006). Tools for financial innovation: Neoclassical versus behavioral finance. *Financial Review*, *41*(1), 1-8.

Sewell, M. 2007. *Behavioral Finance*.University of Cambridge

Sierminska, E. M., Frick, J. R., & Grabka, M. M. (2010). Examining the gender wealth gap. *Oxford Economic Papers, gpq007*

Waweru, N. M., Munyoki, E., & Uliana, E. (2008). The effects of behavioral factors in investment decision-making: a survey of institutional investors operating at the Nairobi Stock Exchange. *International Journal of Business and Emerging Markets*, *1*(1), 24-41.