The Influence of Demographic Factors on Saving and Investment Decision of High School Teachers in Ethiopia: A Case Study on Dangila Woreda

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Abstract
This study was conducted with the objective of analyzing and identifying the demographic factors that influence saving and investment decision of high school teachers. In order to meet this objective, primary data was collected fromthe sample of 88 high school teachers in Dangila Woreda. Linear regression model was used to analyze the effect of explanatory variables on the dependent variable (saving and investment). A total of 8 explanatory variables were included in the regression. Out   of these, 4 variables had statistically significant effect on saving and investment decision of the respondents. The variables that have significant relationship with the dependent variable are: gender, age, family size, social ceremony expense.
Keywords: Saving and Investment, Teachers, Linear Regression Model

1.   INTRODUCTION
National saving is an important feature for achieving high growth in the economy. It is the sum of savings by public and private sector. More saving rates bring out more investment (Rehman et al., 2011). Saving and investment are normally considered in economics as disposable income minus consumption expenditure. It could also be regarded as income that is not consumed immediately by buying goods and services (Odoemenem et al, 2013).The demographic composition of a country's population may be associated with its saving rate and investment, and may therefore have consequences for its economic growth. One explanation for such an association is that the saving and investment rate tends to be relatively high for a birth cohort when it experiences its peak earnings, and relatively low when a cohort anticipates relatively low earnings, such as during retirement(Hira, 2006).

In finance, investment is the application of funds to hold assets over shorter or longer term in the hope of achieving gains and/or generating income from those assets. Saving is closely related to investment and in many instances the terms saving and investment are used interchangeably (Sireesha & Laxmi, 2013).

The theory of economic growth, Schumpter (2008)has stated the interest to increase domestic financial institutions and patterns of behavior necessary to generate and mobilize scarce capital or saving and investment funds as key conditions for economic growth. An economy needs to develop true capital formation, it has to provide a climate that motivates saving and mobilized into productive investment.

The average gross domestic investment (GDI) of SSA countries as a proportion of their GDP has been lower than the corresponding average for all developing countries (Oyejide, 1999). A high level of liquidity in financial system is not necessarily a reflection of high level of saving. In fact, the overall saving and investment ratio of sub-Saharan counties are very low (Word Bank, 2008).However, Ethiopia is part of sub Saharan countries and the saving level in Ethiopia is very low and little is known empirically about the influence of demographic variable on individual saving and investment.Hence, the researcher motivated to conduct a study on the influence of demographic characteristics on saving and investment preference.

1.1.   Objectives of the study
General Objective
The main objective of the study is to identify the demographic variables that influence saving and investment

decision of the respondents.

Specific Objectives

1. To identify the relationship between demographic variables and saving
2. To analyze the relationship between demographic variables and investment

1.2.   LITERATURE REVIEW

1.2.1.   Determinants of saving and investment

The household saving and investment decision is influenced by different demographic variables, such as age, gender, education, marital status, culture, religion and dependent family size(Graff,et al, 2008).The society we live in is full of constrains likely due to variations and distinctness in the age, sex, culture, tradition, social taboos, and many more which by playing an important role determines the saving and investment behavior of any region, state or country (Oyejide, 1999).

1.2.1.1. Relationship between Demographic Variablesand Saving

The life-cycle hypothesis provides a direct theoretical relationship between aging and saving behavior (Modigliani and Brumberg 1954). A snapshot of the saving profile across age groups for different countries shows the obvious increase in savings for middle-age groups compared with younger ones. The life-cycle pattern is not nearly so clear when it comes to the middle-age and older relationship. Still, almost all countries individuals age 60 or older do save at a lower rate than those in the immediately younger age groups.For lower income group age, female to male ratio, marital status insignificantly affect saving levels (Rehman, Bashir& Faridi, 2011).

According to Odoemenem et al (2013), finding shows that from the demographic factors sex has significant influence on saving, but the number of dependents, age composition, and education level did not have significant influence on saving. savings is low for younger groups, high for middle age groups, and again low among old age groups (Ashok Kumar, et al, 1985).

1.2.1.2. Relationship between Demographic Variables and Investment

According to Bhatt et al. (2013), result shows that females are conservative while investing, whereas males are aggressive. There is no significant relationship between the Marital Status and the investment choice made by the investor.Cultural and different related social factors, greatly influences the perception, thinking and belief about various forms of investment. Based on the finding of Achar (2012), individual characteristics of respondents such as age, gender, marital status, and lifestyle determined the savings and investment behavior. Relationship between demographic factors and investments, it was found that a few demographic variables such as family size, annual income and annual savings have significant relationship. But the rest of the variables such as gender, age, education and occupation have no significant relations with the period of investments made by the investors (B.N. Panda & J.K. Panda, 2013). Demographic variables like age, gender, education, occupation plays a very important role in investment decision (Jain & Mandot, 2012; Jamshidinavid et. al., 2012; Geetha & Ramesh, 2011).

1.3.   Research methodology

1.3.1.   Data Type and Source

Primary data was used to analyze the relationship between the dependent variable (saving and investment) and demographic variables. The primary data was collected by using structured questionnaires from high school teachers of Dangila Woreda.

1.3.2.   Sampling Design

Simple random sampling was used to select the sample from the target population. The reason for choosing this method was, there are availability of the number of borrowers from rooster or master of register book of the education bureau and the homogeneity characteristics of the respondents.

 The total number of high school teachers in Dangila Woreda was 201. To determine the sample size from the total population, Yamane (1967) formula was applied. Confidence level of 92% and 8% sampling error was considered.

$$n = N/ (1+Ne^2)$$
$$n = 201/ (1+ 310 \times 0.08^2)$$

   $= 201/ 2.2864$

  $= 88$

Where   N = the size of the population

               n = the size of the sample

               e = the level of precision

Based on this, the researcher decided to use 88 high school teachers as a sample size from the 201 teachers.

1.3.3.   Model Specification

Linear regression model is used to analyze the data which were collected from the respondents.This study

assumes linearity because the objective of the study is to test whether there is any relationship between the demographic variables and saving and investment, assuming causality. Separate linearregression models were adopted respectively for the demographic determinants of saving and investment behavior as shown below.

The linear multiple regression model is formulated in this form;

Sav& invest = α + β_1Age + β_2Gend + β_3Mars + β_4Educ + β_5Occup + β_6Deps + β_7Scex + β_8Rel + e.

Where, Sav or invest= saving& investment; Age = age of respondent; Gend = gender; Mars = marital status of respondent; Educ = educational status of respondent; Occup = occupation of respondent; Deps= number of dependents; Scex = social ceremony expenses; Rel = religion;e = error term

1.4.   RESULTS AND DISCUSSIONS

Linear regression model was employed to identify the relationship between saving and demographic characteristics of teachers, and investment and demographic characteristics of the teachers in the study area.

In the regression model includes a total of eight independent variables. Out of these, four variables were found to be significantly influence the saving and investment decision of the respondents at different significant levels.

Table 1.1 regression result of saving vs demographic characteristics of the respondents

Regress: saving = gend, age, mars, educ, occup, famsz, scex & rel

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Linear regression   Number of observation = 88

Prob > F   = 0.0000

R-squared   = 0.6816

Adj R-squared = 0.6493

Saving	Coefficient	Std. Err.	t	P>t
gend	.2195344	.0680703	3.23	0.002*
age	-.0800287	.0314736	-2.54	0.013**
mars	-.0155966	.0692768	-0.23	0.822
educ	.0415124	.0473394	0.88	0.383
occup	-.1156546	.0721737	-1.60	0.113
famsz	.3290107	.0399048	8.24	0.000 *
scex	-.2180666	.0695682	-3.13	0.002*
rel	-.0221831	.0477618	-0.46	0.644

*significant at 1%, **significant at 5%, ***significant at 10%

Source: own computation (2015)

Table 1.2 regression result of investment vs demographic characteristics of the respondents

Regress: investment = gend, age, mars, educ, occup, famsz, scex & rel

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Linear regression   Number of observation = 88

Prob > F   = 0.0000

R-squared   = 0.5573

Adj R-squared = 0.5125

Investment	Coefficient	Std. Err.	t	P>t
gend	.1717763	.080157	2.14	0.035**
age	-.0716615	.0370621	-1.93	0.057***
mars	-.0292166	.0815778	-0.36	0.721
educ	-.0287536	.0557451	-0.52	0.607
occup	-.2059001	.084989	-2.42	0.018**
famsz	.2897242	.0469904	6.17	0.000*
scex	-.2066452	.0819209	-2.52	0.014**
rel	.0144699	.0562424	0.26	0.798

*significant at 1%, **significant at 5%, ***significant at 10%

Source: own computation (2015)

1.4.1.   Saving and Investment Vs Demographic Factors

According to the regression result gender (gend) affects positively both saving and investment decision of the teachers at 1% and 5% significant level respectively.So it indicated that Male teachers have a better saving and investment habit than female teachers.

Age is negatively related with saving and investment at 5% and 10% respectively. That is, a one year increase in age is leads to reduce the teachers saving and investment by dollar -.0800287 and -.0716615

respectively. particularly if their age is above 60 years old. The reason is that at this age they are not on the job, therefore, they are trying to use their previous saving and investment in order to survive.

The survey data pointed out that family size (famsz) directly affects saving and investment at 1% significant level. The coefficient result explains that a single labor increase in the household, it enhances the saving and investment ability of the respondents by dollar .3290107 and .2897242 respectively.

Social ceremony expense (scex) is a variable that influences both saving and investment decision of the respondents negatively at 5% significant. It means that one dollar increase on social ceremony expense, it reduces saving by dollar -.2180666 and investment by dollar-.2066452. It indicated that in Ethiopia there are a number of social ceremonies. Some of them are related with religious activities and the rest of them are related with the culture of the society which is highly affects the societies saving and investments negatively.

Occupation (occup) of the household's head is yet another factor significantlyand negatively affects investment decision of the teachers at 5% significant level. This implies that teachers in Ethiopia are low income earnersbecause of this, income minus consumption that gives a negative value. It indicates consumption greater than income;as a result,they take credit from different sources particularly microfinance institution for survive.

1.5. CONCLUSIONS AND RECOMMENDATIONS

In this study the researchers are trying to identify the impact of demographic factors on saving and investment. The data were collected from high school teachers in Dangila Woreda, Ethiopia. The researchers were used OLS model in order to determine the factors so based on the regression result age and social ceremony expense has a negative significant effect on saving and investment, whereas, gender and family size has a positive significant effect on saving and investments. And also occupation has a negative effect on investment.

The responsible body should have to create the awareness to the teachers by providing training on the economic benefit of saving and investment and the disadvantages of social ceremony expense on the economy.

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Regression Result

. regress saving gend age mars educ occup famsz scex rel

Source	SS	df	MS
Model	14.9635291	8	1.87044114
Residual	6.99101631	79	.088493877
Total	21.9545455	87	.252351097

Number of obs =   88
F(8,   79) =   21.14
Prob > F   = 0.0000
R-squared   = 0.6816
Adj R-squared = 0.6493
Root MSE   = .29748

saving	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
gend	.2195344	.0680703	3.23	0.002	.0840438	.3550249
age	-.0800287	.0314736	-2.54	0.013	-.1426753	-.0173822
mars	-.0155966	.0692768	-0.23	0.822	-.1534887	.1222955
educ	.0415124	.0473394	0.88	0.383	-.0527144	.1357391
occup	-.1156546	.0721737	-1.60	0.113	-.2593127	.0280034
famsz	.3290107	.0399048	8.24	0.000	.2495822	.4084393
scex	-.2180666	.0695682	-3.13	0.002	-.3565387	-.0795945
rel	-.0221831	.0477618	-0.46	0.644	-.1172505	.0728844
_cons	1.319072	.2199551	6.00	0.000	.8812627	1.756882

. regress investment gend age mars educ occup famsz scex rel

Source	SS	df	MS
Model	12.2036178	8	1.52545222
Residual	9.69410948	79	.122710247
Total	21.8977273	87	.251698015

Number of obs =   88
F(8,   79) =   12.43
Prob > F   = 0.0000
R-squared   = 0.5573
Adj R-squared = 0.5125
Root MSE   = .3503

investment	Coef.	Std. Err.	t	P>|t|	[95% Conf. Interval]	
gend	.1717763	.080157	2.14	0.035	.0122278	.3313248
age	-.0716615	.0370621	-1.93	0.057	-.1454317	.0021087
mars	-.0292166	.0815778	-0.36	0.721	-.1915931	.1331599
educ	-.0287536	.0557451	-0.52	0.607	-.1397114	.0822043
occup	-.2059001	.084989	-2.42	0.018	-.3750664	-.0367338
famsz	.2897242	.0469904	6.17	0.000	.1961922	.3832563
scex	-.2066452	.0819209	-2.52	0.014	-.3697047	-.0435857
rel	.0144699	.0562424	0.26	0.798	-.0974779	.1264177
_cons	1.512646	.2590108	5.84	0.000	.9970974	2.028194

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