

## Impact of Age and Income on Investment Behavior of Individual Investors of the Bank and Insurance Sector

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**Abstract:** Every individual investor is different and unique. The way of savings, pattern of investment, choice of investment avenues etc differ from each other in various terms. Every investor has some guiding and influencing factors which affect their investment behavior and decision. In the present study an attempt has been made to record the impact of demographics specifically, Income and age on investment behavior of individual investors belonging to banking and insurance sector. Primary data was collected through a well structured questionnaire and was distributed to the respondents of Indore city. 353 respondents' responses were recorded. Regression model was applied to analyze the data. The study found that the investors belonging to the selected sector were affected by the age. Demographic variable particularly age has a significant impact on the investment behavior of individual investors of bank and insurance sector.

**Keywords –** Individual Investor, Investment Behavior, Age, Income and Demographics.

1. **INTRODUCTION:** An economy may enjoy high levels of consumption without investment, but this would result in an unbalanced economy. States with higher investment commitments are more progressive. Few states in India have carved out a niche for themselves in terms of economic development, owing to substantial investments. Investments generate revenue and employment, as well as demand and consumption, because they have a "multiplier" effect.

Investment is employed for productive purposes, and it is widely recognized as a critical tool for a country's economic growth and development. Direct equity, commodities and derivatives, debt, mutual funds, real estate, and gold are just a few of the investing options available today. Some investing products are quite dangerous, while others are completely risk-free.

Traditional financial models presume that investors make logical decisions. As a result, investors use the knowledge available to make finance decisions that maximize utility. The models, however, are based on assumptions that may or may not hold true in practice. The assumption that all investors act rationally has been debunked because they engage in irrational behaviors such as excessive trading, stock purchases without considering fundamental value, relying on past performance, investing in the avenues their friends prefer, and holding loss-making options while the market is not favorable.

The progress of finance has resulted in the emergence of behavioural finance as a new discipline, which focuses on the biases and psychological aspects that affect investors. Behavioural finance is a brand-new approach to finance. It investigates the biases of investors as well as their investment behaviour. It attempts to bridge the neoclassical-finance and cognitive psychology divide. It focuses on individual and financial market biases, as well as stock market abnormalities, among other things. It also explored the factors influenced investing decisions. The primary source of this nefarious behaviour is that “investors act irrationally” (Shiller, 2000), as a result of their gender, age, and income.

Many aspects influence investor behaviour during the rational selection of investments, including attitudes, awareness, perception, and willingness. Alongside the psychological and behavioral factors demographics play an important role in influencing investor’s decision. Gender, income, socioeconomic history, marital status, level of employment success, age, sex, and other demographic parameters are the distinguishing elements among investors.

The greatest challenge that investors have when making investments is not only the decision being made at the time, but also the returns in the future; while taking into account the unpredictable future with flawless accuracy. Because of the presence of diverse elements, decisions are not made in the same way by each individual.

### 1.1 Individual Investors

The most important segment of the financial markets is investors. In truth, investors own the great majority of the money that is invested in the financial markets. As a result, the stability of any country's financial system and markets is determined by the decisions and behaviors of investors on financial markets. In the marketplace, there are many distinct types of investors. An investor is someone who makes a present sacrifice in order to gain a benefit in the future. Dividends, capital appreciation, retirement benefits, bonus, and other advantages are all available as options to them. An individual, a government, or a corporation can be an "investor."

Individual investors are people who invest and manage their money independently.

“An individual investor, as opposed to an institutional investor, purchases small amounts of assets for oneself or herself.”

### 1.2 Individual investors of Bank and Insurance sector

Bank and insurance are assumed as the blood transporting veins of the economy. These two sectors are the most important part of financial service industry. These two provides funds and security of those funds to their customers and hence are pretty much aware about all the ups and downs of the financial market. The investment behavior of the individual investors belonging to Bank and Insurance sector has attracted researcher’s interest. The assumption that investors from these sectors have complete knowledge and awareness How, Why, When, What and Where about the investments and investment avenues forms the base of the present study.

The paper tries to explore the relationship between the demographics of the individual investor and their impact on the investment behavior. In this study the researcher has tried to investigate the interaction between various demographic factors and the investment behavior of the individual investors.

## 2. Objectives of the study

1. To analyze the Demographic profile of the individual investors of Bank and Insurance sector.
2. To analyze the Investment profile of the individual investors of Bank and Insurance sector.
3. To investigate the Impact of age on investment behavior of individual investors Bank and Insurance sector.
4. To investigate the Impact of income on investment behavior of individual investors Bank and Insurance sector.

## 3. Review of literature

According to the studies majority of investors choose to conserve money and invest on the basis of safety. For this purpose they choose to contact and take guidance from financial professionals. These professional/s organizations affect the investment decisions of individual investors [1]. Alongside professional guidance which is a financial factor the demographic component is one of the behavioural elements that play a key influence in defining investor behaviour and decisions. Demographic considerations, for example, influence one's investment product selection [2][3]. Researches suggest that age and gender are the most important determinants which influences the investment behaviour and decisions [4]. Few studies found that there is a negative link between age and the amount of money held. But despite that age always play an important role and has a substantial association with investment behaviour, [5].

The assumption of age being important element was further supported by the study which found that the typical person's peak financial decision-making age is around 53 years old, and that age exhibits the investors' risk perception and financial choice over the life cycle and implications for regulation [6]. In contrast, to this another study found that investors' capacity to make prudent financial judgments is linked to their ability to acquire financial knowledge. Making solid financial judgments rises rapidly between the ages of 20 and 30, levels off and peaks in the 50s, and then begins to diminish sharply between the ages of 70 and 80[7].

In a study conducted at the Nairobi Securities Exchange, impact of different behavioral biases were discovered and was found that the effect of age on investors' decisions, where respondents in the age brackets of 18-30 years, 31-40 years, and 41-50 years were affected by overconfident bias. Age differences have a substantial impact on the amount of overconfident bias among the participants, according to the findings. Furthermore, the author determined that the most affected investors are those between the ages of 31 and 40[8].

In another study the relationship between demographic parameters such as gender, age, married status, education, income, and family members, and investor's risk tolerance and investment choice was explained. In the study of income, was termed as a socio-economic factor. According to the author, respondents with incomes of at least \$10 million invest more of their money in capital market instruments than those with incomes of less than \$10 million, who prefer to keep their money in a bank account. As a result, they came to the conclusion that low-income investors prefer to save their money in a bank account, implying that income influences risk behaviour [9].

In an exploratory study by Ajmi, it was found that risk tolerance is positively connected with income and education. [10]. Whereas another study confirmed that investors' behaviour and decision-making are influenced by their income level, education level, and marital status [11].

An important study described the critical factors that influence young investors' investment behaviour, based on which the study concluded that the majority of investors invest for growth and additional income, and the primary factor that guides their investment decision is a risk factor, implying that most investors are risk-averse[12].

#### 4. Hypotheses

On the basis of review of literature following hypotheses was framed:

1.  $H_{01}$ : There is no significant impact of Age on investment behavior of individual investors Bank and Insurance sector.
2.  $H_{02}$ : There is no significant impact of Income on investment behavior of individual investors Bank and Insurance sector.

#### 5. Research method

**5.1. Study:** The present study is an exploratory research.

**5.2. Sample:** The population was from Indore city of individual investors of Bank and Insurance sector.

**5.3. Sample size:** The sample size of the study was 353 respondents.

**5.4. Sampling:** Purposive Convenience sampling technique was applied to collect the data.

**5.5. Data Collection:** Primary data was collected through a structured questionnaire consisting 20 variables.

**5.6. Data Analysis:** Exploratory Factor Analysis, Linear Regression and Percentage Analysis were applied to analyze the data. For data analysis researcher used the SPSS 25 version and Ms Excel.

**5.7. Variables:** Independent Variable – Age and Income

Dependent Variable – Investment Behavior

**6. Demographic profile of the individual investors**

Table – 1

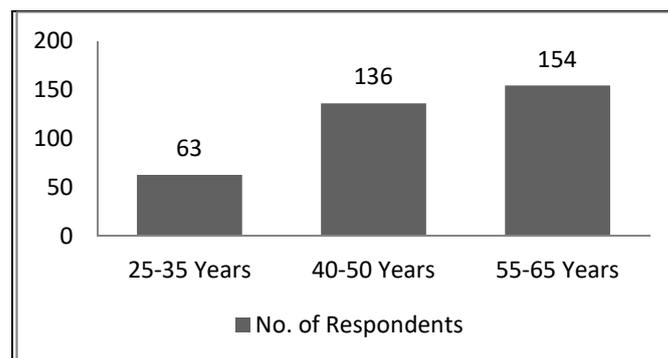
**Age Profile of Investors**

AGE					
Valid		Frequency	Percentage	Valid percentage	Cumulative Percentage
	<b>25-35 Years</b>	63	17.9	17.9	17.9
	<b>40-50 Years</b>	136	38.5	38.5	56.4
	<b>55-65 Years</b>	154	43.6	43.6	100
	<b>Total</b>	353	100	100	

Source: Primary Data Analysis

**Interpretation**

Table 1 indicates the Age profile of the respondents. From the above table, it is clear that 17.9% of the investors belong to the age group of 25-35 Years while 38.5% of the investors are from the age group of 40-50 Years and 43.6 % belong to the age group of 55-65 Years.



**Fig. 1 Age Profile of the Individual Investors**

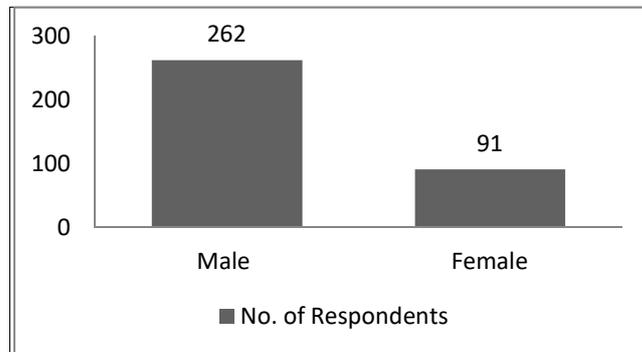
**Table – 2**  
**Gender Profile of Investors**

<b>GENDER</b>					
<b>Valid</b>		<b>Frequency</b>	<b>Percentage</b>	<b>Valid percentage</b>	<b>Cumulative Percentage</b>
	Male	262	74.33	74.33	74.33
	Female	91	25.77	25.77	100
	<b>Total</b>	<b>353</b>	<b>100</b>	<b>100</b>	

Source: Primary Data Analysis

**Interpretation**

Table 2 indicates the Gender of the respondents. From the above table, it is clear that 25.77% of the respondents are female while 74.33% of the investors are male.



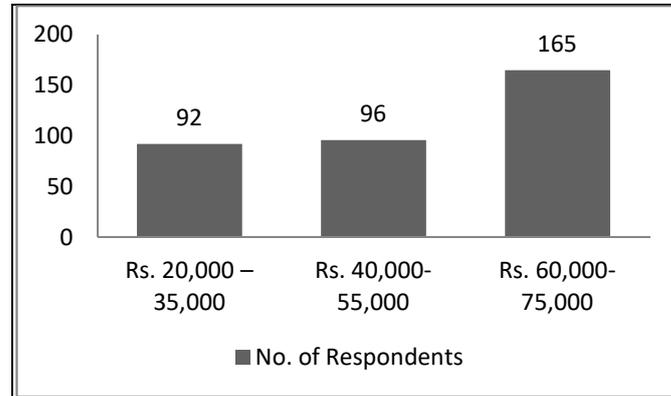
**Fig. 2 Gender Profiles of the Individual Investor**

**Table – 3**  
**Income Profile of Investors**

<b>Particulars</b>	<b>Frequency</b>	<b>Percentage</b>	<b>Valid percentage</b>	<b>Cumulative Percentage</b>
<b>Rs. 20,000 – 35,000</b>	92	26	26	26
<b>Rs. 40,000- 55,000</b>	96	27.1	27.1	53.1
<b>Rs. 60,000- 75,000</b>	165	46.9	46.9	100
<b>Total</b>	<b>353</b>	<b>100</b>	<b>100</b>	

**Interpretation**

Table 3 indicates the Income profile of the respondents. From the above table, it is clear that majority of the investor i.e. 46.9% belong to the income group of Rs. 60,000-75,000 while 27.1% from the income group of Rs.40,000-55,000 and 26.0 % belong to the income group of Rs. 20,000-35,000.



**Fig. 3 Income Profiles of the Individual Investors**

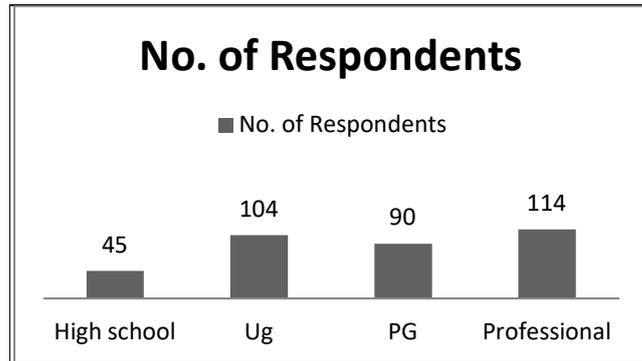
**Table – 4  
Education Profile of Investors**

Particulars	Frequency	Percentage	Valid percentage	Cumulative Percentage
	45	12.7	12.7	12.7
	104	29.4	29.4	42.1
PG	90	25.5	25.5	67.6
<b>Professional</b>	114	32.4	32.4	100
<b>Total</b>	353	100	100	

*Source: Primary Data Analysis*

**Interpretation**

Table 1 indicates the Education profile of the respondents. From the above table, it is clear that majority of the investor i.e. 32.4% are Professionals, while remaining 12.7%, 29.4% and 25.5% were high school pass outs, graduates and post graduates respectively.



**Fig. 4 Education Profiles of the Individual Investors**

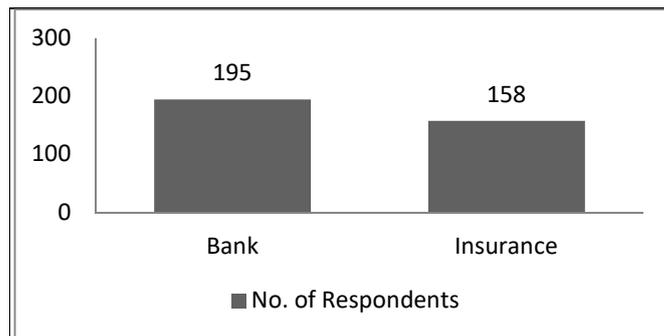
**Table – 4  
Type of Industry**

Particulars	Frequency	Percentage	Valid percentage	Cumulative Percentage
Bank	198	56.1	56.1	56.1
Insurance	158	44.9	44.9	100
Total	353	100	100	

*Source: Primary Data Analysis*

**Interpretation**

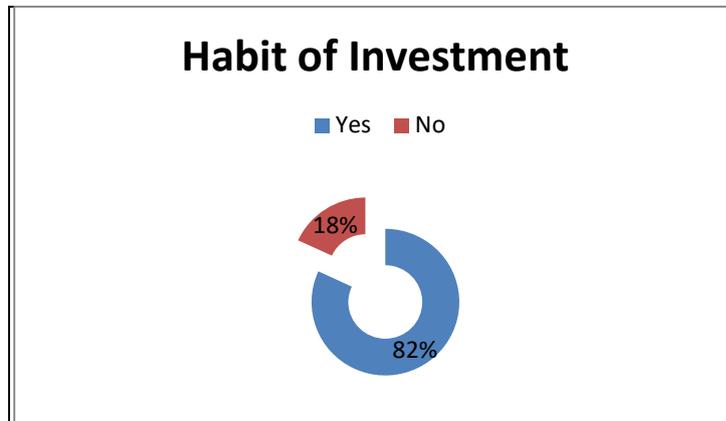
Table 4 shows that majority of investors who responded for the study belong to Banking sector i.e. 56.1% while respondents from Insurance sector are 44.9%.



**Fig. 5 Type of Industry**

**7. Investment profile**

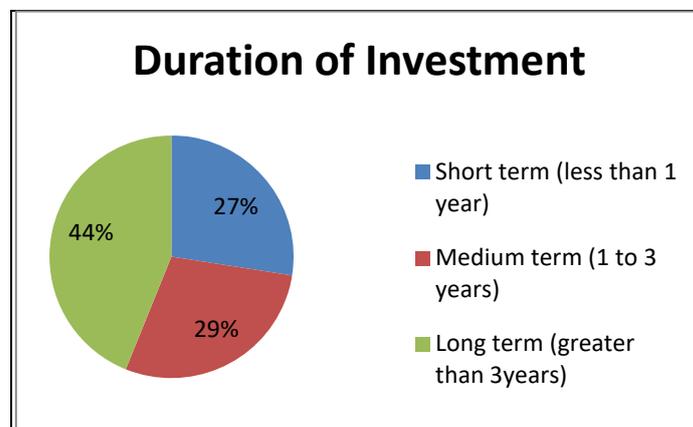
The investment profile of the investors included four items viz, Do you have the habit of investments?, What duration of investments you prefer?, What is the frequency of your investments and The source of financial information preferred by you



**Fig. 6 Habit of Investment**

**Interpretation**

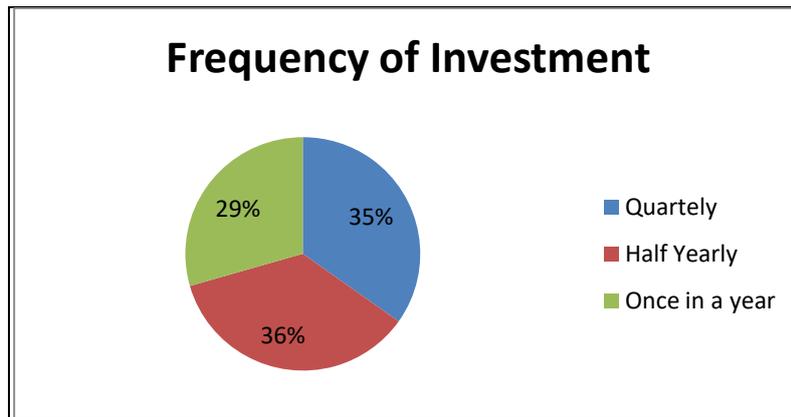
Fig. 1 indicates the investors’ habit of investment. From the above Fig., it is clear that 82% of the respondents have the habit of investments while 18% of the respondents showed disinterest in investments.



**Fig. 7 Duration of Investment**

**Interpretation**

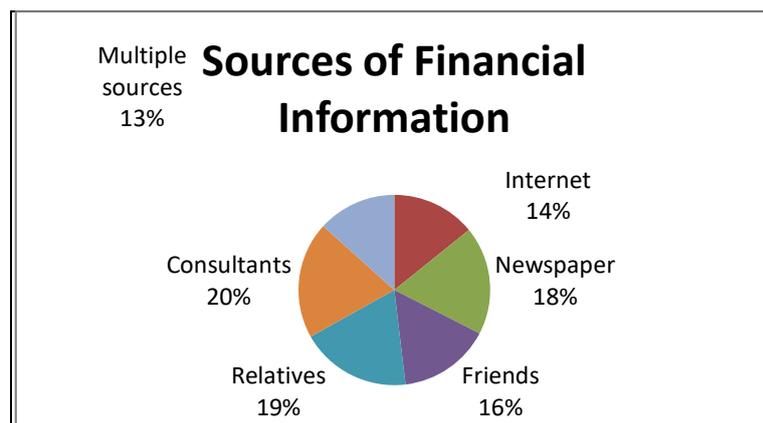
Fig. 2 indicates the Duration of investments preferred by the investors. The above Fig., shows that majority of respondents i.e 44% prefer to invest for a long term duration i.e., for more than 3 years, while 27% prefer to invest for short duration of less than 1 year and 29% choose to invest for about 1-3 years i.e. for Medium term.



**Fig. 8 Frequency of Investment**

**Interpretation**

Fig. 3 indicates the Frequency of investments preferred by the investors. From the above Fig., it is clear that majority of respondents' i.e 36% prefer to invest half yearly i.e. in every six months, while 29% invest once in year and 35% choose to invest quarterly



**Fig. 9 Sources of Financial Information**

**Interpretation**

Fig. 4 indicates the Source of Financial Information preferred by the investors. From the above Fig., it is clear that respondents select various options to get the financial information related to investments .Out of all the available sources majority of respondents' i.e 36% prefers to invest half yearly i.e. in every six months, while 29% invest once in year and 35% choose to invest quarterly.

**8. Analysis and Interpretation**

**8.1. Reliability**

The test of reliability was applied to check whether the data collected is reliable for the further study or not. Table below shows the value of Chronbach's alpha, applied to check the reliability and accuracy of the data collected for present study.

**Table – 5**  
**Reliability Statistics**

Reliability Statistics	
Cronbach's Alpha	N of Items
0.89	20

Table indicates that the data collected is reliable and can be studied further as the value of Chronbach's alpha is 0.890 which  $>.60$ .

### 8.2 KMO and Bartlett Test

The appropriateness of any data for factor analysis depends upon KMO measure of sample adequacy and Bartlett's test of Sphericity. KMO measure of sample adequacy was found to be 0.8 and Bartlett's test of Sphericity was also found to be significant. Thus it was considered to be fairly acceptable for factor analysis. Consider below Table for KMO and Bartlett's Test.

**Table – 6**  
**Kmo & Bartlett's Test**

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.846
Bartlett's Test of Sphericity	Approx. Chi-Square	4533.575
	df	136
	Sig.	.000

### 8.3 Linear Regression Analysis

Linear regression analysis was applied to investigate the impact of age and income on the investment behavior of the individual investors of bank and insurance sector.

**H<sub>01</sub>: There is no significant impact of Age on investment behavior of individual investors Bank and Insurance sector.**

R square value (.018) suggests that 1.8 % variation in investment behavior of individual investors of Bank and Insurance sector can be explained with the help of Age.

Table – 7

**Regression Model – Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.135 <sup>a</sup>	.018	.016	8.17544

a. Predictors: (Constant), Age

Table – 8

**Regression Model – Anova Results**

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	437.578	1	437.578	6.547	.011 <sup>b</sup>
	Residual	23460.08	351	66.838		
	Total	23897.66	352			

a. Dependent Variable: Investment Behavior

b. Predictors: (Constant), Age

F value is 6.547 at significant level .011 which means that the model is appropriate for further analysis.

Regression Equation is

$$Y = a + bx \quad Y = 72.418 + (.135)x \tag{1}$$

Y is Investment Behavior (dependent variable) and x is Age of individual investors of Bank and Insurance Sector (independent Variables)

Table – 9

**Regression Model – Coefficients**

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	72.418	1.396		51.863	.000
	Age	1.504	.588	.135	2.559	.011

a. Dependent Variable: Investment Behavior

T value 2.558 at significant level .011, So null hypothesis *There is no significant impact of Age on investment behavior of individual investors Bank and Insurance sector* is rejected,

which means there is a significant impact of Age on Investment Behavior and this model implies that independent variable that is Age is making an impact on Investment Behavior of individual investors Bank and Insurance sector which is dependent variable.

**H<sub>02</sub>: There is no significant impact of Income on investment behavior of individual investors Bank and Insurance sector.**

R square value (.018) suggests that 1.8 % variation in investment behavior of individual investors of Bank and Insurance sector can be explained with the help of Age.

**Table – 10**

**Regression Model – Model Summary**

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.058 <sup>a</sup>	.003	.000	8.23760

a. Predictors: (Constant), Income

**Table – 11**

**Regression Model – Anova Results**

ANOVA <sup>a</sup>						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	79.467	1	79.467	1.171	.280 <sup>b</sup>
	Residual	23818.193	351	67.858		
	Total	23897.660	352			

a. Dependent Variable: Investment Behavior

b. Predictors: (Constant), Income

F value is 1.171 at significant level .280 which means that the model is not appropriate for further analysis.

Regression Equation is

$$Y = a + bx \quad Y = 74.548 + (.058)x \tag{2}$$

Y is Investment Behavior (dependent variable) and x is Income of individual investors of Bank and Insurance Sector (independent Variables)

Table – 12

**Regression Model – Coefficients**

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	74.548	1.248		59.718	.000
	Income	.573	.530	.058	1.082	.280

a. Dependent Variable: Investment Behavior

T value 1.0821 at significant level 0.280, So null hypothesis *There is no significant impact of Income on investment behavior of individual investors Bank and Insurance sector* is accepted, which means there is no significant impact of Income on Investment Behavior and this model implies that independent variable that is Income is making no impact on Investment Behavior of individual investors Bank and Insurance sector which is dependent variable.

## 9. Conclusion

Investment behavior of individual investors is a summation of multiple factors which includes demographic, behavioral, psychological, social etc. In the present study age and income were selected as independent variable, with a goal to measure and record their impact on the investment behavior. Age and income are two most important demographic variables which influences an investor's decision of investment. Income predominantly has an important role in deciding about investments i.e. whether to invest or not?, for what duration investment should be made? Which investment option and risk level to opt for? And the amount of savings also depends on the level of income. Whereas age aids the decision by adding the aspect of experience.

The study found that the investment behavior of individual investors belonging to Banking and Insurance sector has an uncommon characteristic. The investors of these sectors are affected by their age but not by the income. Results obtained from regression analysis suggest that despite having any level of income these investors have flair to invest, which is also supported by the investment profile. The investment profile implies that majority of the investors i.e. 82% of the investors have the habit of investment.

Age is considered as one of the most controversial demographic factor by the researchers. Some opines that it has least or zero contributions in investment decision whereas some suggests that age is important as it provides maturity, experience and rationality to the investors. In the present study researcher also found that the age affects the investment behavior of individual investors of selected sectors i.e. banking and insurance.

Like all other studies this study also has some limitations. Small sample size and geographical area of selected sample limits the findings of the study. The research was limited to one city only, definitely a larger sample and inclusion of metro cities may help future researches to attain more specific results.

In conclusion this research provides considerable findings about the impact of demographic variable on investment behavior of individual investors. Age significantly affects the decisions of investment, but income does not. Alongside the results, it can be suggested to include other demographic variables like gender, marital status, family size and family income in the future researches to attain a holistic view about the constantly changing behavior of individual investors.

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