# Impact of Demographics and Perceptions

# of Investors on Investment Avenues

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#### Abstract

The primary purpose of this study is to investigate how investment choice gets affected by the demographics and perceptions of the investor. Investor's behavior is influenced by many factors at the time of investment decision making. Demographic profile and perceptions play an important role to select a particular choice of investment. This paper helps to enhance the knowledge on different investment avenues like bank deposits, life insurance policies, mutual funds and equity which in turn will be highly useful to the financial advisors as it will help them advise their clients regarding these avenues with respect to their demographic profiles. The study also highlights the evidences that the investment choice depends on and is affected by the demographic variables and perceptions. However, the results of this research shows that the most investors have little knowledge on the investment avenues for their investments. Mann Whiteny 'U' test, Kruskal- Wallis has been conducted to test the hypotheses with the help of SPSS. Logistic regression results of this study proves that investors' age, gender, education and occupation significantly influences the selection of investment avenues. Wealth Management professionals emphasizes that customer behavior and psychology play a vital role in successfully building and sustaining a wealth management relationship. Behavioral finance is new emerging science which focuses on understanding the psychology effects on investment decision.

Keywords: Investment, Demographics, Perception, Behavioral Finance

## 1. Introduction

Behavioral finance in today's world is increasingly gaining a place in the process of decision making. It has the ability to influence investors in relation to their decision making. Investors will be able to make a decision much better about their investment options with a proper understanding of behavioral finance. Very few investors are able to really gauge the performance of a company and evaluate the company's risks and returns to make sound decisions. According to Riley and Chow (1992), most of the investors rely on their instincts and emotional biases while taking decision on trading. This is the reason why it is essential to the various elements which influence an investor to take a certain step. Most economic and financial theories claim that humans act and react rationally. They react to the market sentiments, follow their gut feelings and eventually make a decision. In the initial years of trading, it was identified that a huge gap between the returns expected and the actual returns that were generated. This showed clearly the existence and impact of psychology in the investment decisions. They found that investors took certain emotional factors into consideration while taking a decision and psychologist have tried to understand these factors and help the investors to realize them, which in turn helped them to take a wiser decision and choose the best option amongst the available options. In the sections that follow, we present the literature review and hypothesis after which the methodology for the study is described. The results are presented and discussed after which the implications and conclusions are given.

## 2. Literature Review

Many studies have been carried out to examine the perceptions of the investors and the investment preferences with regard to gender, age, education, occupation & income. Stendardi (2006) reveals that though personality is a trait that is very dynamic and has a tendency to waiver and change with time, the process is rather slow, takes considerable period of time and is fairly stable in varying situations and circumstances. Thus personality makes a considerable impact in shaping the decisions of an individual.

Early offerings to the literature of behavioral finance includes Miller (1977) explored some of the implications of a market with restricted short selling in which investors have differing estimates of the returns from investing in a risky securities markets. He developed a standard two period model to project the investor's decisions. Shefrin Hersh (2008) described that about two key behavioral obstacles to maximize the value, one internal and another external. He also stressed that the managers and employees are responsible for internal causes and analysts and investors are responsible for external causes. Shleifer, Andrei and Vishny (1997) highlighted the importance to learn the difference between earning returns by luck or skill. This is very important to the investors to take rational decisions at the time of investments.

While there have been studies on investors behavior and the impact on investments but there seems to be no study of the investors' perceptions influencing the investment decisions. The roles of gender and education on investment preferences have been the focus of behavioral finance literature. The aim of these studies was to find out what demographic factors affect participants' investment choices with regard to risk. Chin (2012) and Ahmad, Safwan, Ali and Tabasum, (2011) predicted individual investment choices (e.g., stocks, bonds, real estate) based on lifestyle and demographic attributes. These investors see rewards as contingent upon their own behavior Chira and Thornton, (2008). Iman (2011) studied and sought to understand the patterns of differences in the risk taking habits of men and women. Their studies reaffirmed the result that women significantly differ in their investment behaviors than men. This was supported by experimental and field studies. There was a consensus that women make more conservative decisions than men when investing. Other studies have also reiterated this finding. The studies of Fisher (2010) showed that females are less risk seeking than males irrespective of familiarity and framing, cost or ambiguity. Gender is related to risk taking as revealed in Mutual Fund investment decision (Diacan, 2004). It was found that women exhibit less risk taking than men in their most recent, largest and riskiest mutual fund investment decisions. A study highlighting the influence of race has also contributed to this burgeoning literature. Like the studies of Fisher (2010) gave evidence that suggests that men, both Black and White, take an active role in their portfolio allocations, with White men choosing riskier portfolios.

A study conducted by Barber and Odean (2001) found the men self confidence levels are higher than women when it comes for the investments. Wang, Keller & Siegrist (2011) revealed through their study that women's risk perception is more than that of men after working and comparing various investment avenues like valuable securities, bonds, stocks. Charles and Gneezy (2007) highlighted that the women invest less in risky assets than men.

Eckel and Grossmann (2001) found significant gender differences in choices between several risky prospects with women indicating a preference for the less risky prospect. Powell and Ansic (1997), found that though their study that male pays attention on different types of investment avenues than female. Through the above studies it can be concluded that the women are risk avoiders than men in general. Grinblatt and Keloharu (2000) through their study found that individual investors are net buyers of stocks with weak future performance, whereas business organization are net buyers of stocks with strong future performance. There have also been studies to show the influence of age on the investment patterns as well. Risk aversion decreases with age until the period, five years prior to the retirement and then increases with age (Rana, Murtaza, Noor, Inam-u-din and Rehman, 2011). Education has also been considered a significant factor in influencing investor profiles. Investors with education higher than the secondary level hold more risky portfolios Weber, Blais, & Betz, (2002). Income is another factor that researchers have investigated the impact on investments. Relative risk aversion of persons reduces as the income level rises and for high income individuals, it reduces significantly Graham, Stendardi, Myers, and Graham, (2002). Smith and Harvey (2011) have studied perceptions of bank depositors on quality circles, customer complaint cell, priority banking, telebanking and customer meets in private banks. The primary objective of this study is to find effect of demographic variables on choice of investment avenues. This study also identifies the popular perceptions of individual investors with regard to different investment avenues, such as equity, mutual fund, and life insurance policy and bank deposits.

After thoughrough examination of the accessible literature the following hypotheses were formulated to study whether the choice of investment depends upon variables, such as gender, age, educational qualification, occupation and income. The objectives of the study have been converted into three null hypotheses are stated as follows:

H0 (1): There is no significant difference between males and females in their choice of investment avenues.

H0 (2) : There are no significant differences among the investors belonging to different age groups, educational qualifications and occupation in their choice of investment avenues.

H0 (3): There is no significant relationship among investors' demographics based on age, gender occupation and education on different avenues of investments like equity, mutual fund, life insurance policy and bank deposits.

#### 3. Research Method

The study is based on primary and secondary data. For data collection, structured questionnaire has been used with an ordinal scaling technique. Convenient sampling method was adopted to collect information from respondents. The total numbers of questionnaires distributed were 175 and collected questionnaires were 150. The final sample size after discarding the questionnaires with missing responses was 140, thus the percentage of response is 78. In this study SPSS has been used to test the results and to take decision on hypotheses.

#### Scope

The scope for data collection was limited only to Dubai, the pearl of UAE for the year 2015. The respondents includes businessmen, servicemen, professionals, and housewives.



Figure 1. Factors influence the Investment Decision

#### 4. Analysis and Discussion

Table 1. Socio – Demographic Varibales

|                | Frequency | %     |
|----------------|-----------|-------|
|                | Gender    |       |
| Male           | 79        | 56.4  |
| Female         | 61        | 43.5  |
| Total          | 140       |       |
|                | Age Group |       |
| 25-45          | 74        | 52.8  |
| 46-55          | 53        | 37.8  |
| 55 +           | 13        | 9.2   |
|                | Education |       |
| Undergraduates | 95        | 67.85 |
| Postgraduates  | 45        | 32.1  |
|                | Industry  |       |
| Non-trading    | 72        | 51.2% |
| Trading        | 69        | 33.4% |
|                |           |       |

Results disclosed in Table 1 depicts that the 53% of the respondents are between the age groups of 25-45, 56% of the respondents are males, 68% of the respondents are graduates the rest are postgraduates (32%). 47% are from the non-trading and 51%, trading 33%. To identify the impact of gender difference on investment choice Mann- Whitney Test was performed. The result shows that there is a significant difference for Mutual Fund and insignificant for other avenues. Male and female do vary significantly with regard to Mutual Fund. It can be observed in Table 2 that male prefer more to invest in Mutual Fund than female investors.

#### Table 2. Gender Vs Investment Avenues

|                           | Male | Female |  |
|---------------------------|------|--------|--|
| Bank Deposits             | .263 | .715   |  |
| Mutual Funds              | 1.00 | .600   |  |
| Equity                    | .917 | .896   |  |
| Life Insurance Policy     | .174 | .365   |  |
| The Significance level is | .05. |        |  |

Bank Deposits preferred by female investors' more than male investors. There is a small difference for equity compared to life insurance policies. These results rejects the first null hypothesis of the study and proves that there is a significant difference between males and females in their choice of investment avenues.

The respondents were asked to rank the investment avenues in the order of their interest (5=highly interested, 1=highly uninterested).the mean ranks and other relevant descriptive for various investment a venues. The results shows that the life insurance policy, followed by bank deposit is the most preferred choices for investment among the investors. Equity is third choice and mutual fund is least attractive among investors. To identify the impact of age on investment choice the Kruskal-Wallis test was applied. The investors of various age groups do vary significantly with regard to Bank Deposits. It implies that people invest more in Bank Deposit with increasing age. Educational background affect the investors with mater post-graduation degree qualification invest more in Bank Deposits that there is a significant difference for Bank deposits. It can be observed from the rank that professionals are more attracted towards equity whereas housewives least.

|            | Bank     | Equity | Life Insurance | Mutual |
|------------|----------|--------|----------------|--------|
|            | Deposits |        | policy         | Funds  |
| Age        | .909     | .602   | .809           | .109   |
| Occupation | .712     | .412   | .528           | .429   |
| Education  | .809     | .567   | .610           | .590   |

Table 3. Age, Occupation, Education Vs Investment Avenues

Investors hold different perceptions on liquidity, profitability, collateral quality, statutory protection, etc., for various investment avenues. The formation of perceptions triggers the investment process in its own way. The personal as well as environmental factors influence investors in formulating their perceptions on investment avenues. An educated person perceiving an investment differs from an uneducated one. Similarly, the factors such as age, marital status, occupation, etc. have their influence on perceptual process. A young and unmarried person, for instance, prefers to invest in risky avenues, whereas an aged person with a family responsibility prefers less risky and steady income-generating avenues. Similarly, rural/urban background of individuals, availability of information, accessibility of avenues, etc. Influence individuals in developing their perception. The hypotheses were tested at 5%

level of significance. The independent variables of the study include gender, age, education, occupation and income. The dependent variables were the various investment avenues. The various investment avenues taken into consideration for this are equity, mutual funds, and life insurance policy and bank deposits. The perception with higher mean value were first selected and subsequently cross-checked with their respective co-efficient of variance (CV). SPSS has been used for data analysis. For testing Mann-Whitney test was employed. Standard Deviation (SD) and Coefficient of Variation (CV) with respect to different perception is presented in the below table 4.

|            | Equity | ,     | Mutua | l Funds | Life Insurance Policy |       | Bank Depos |       |
|------------|--------|-------|-------|---------|-----------------------|-------|------------|-------|
|            | S.D    | C.V   | S.D   | C.V     | S.D                   | C.V   | S.D        | C.V   |
| Gender     | 1.30   | 32.50 | 1.27  | 31.75   | 1.26                  | 31.50 | 1.20       | 30.00 |
| Age        | 1.37   | 45.67 | 1.35  | 45.00   | 1.28                  | 32.00 | 1.23       | 30.75 |
| Education  | 1.34   | 33.50 | 1.35  | 33.75   | 1.36                  | 34.00 | 1.17       | 39.00 |
| Occupation | 1.36   | 45.33 | 1.32  | 44.00   | 1.30                  | 32.50 | 1.36       | 45.33 |
| Income     | 1.48   | 49.33 | 1.46  | 48.66   | 1.43                  | 47.67 | 1.47       | 36.75 |

Table 4. Investors' perceptions Vs Investment Avenues

There is no significant relationship among investors' perceptions based on gender, age, education, occupation and income on different avenues of investments like equity, mutual fund, and life insurance policy and bank deposits.

Investors' opinion based on gender is relatively stronger in the case of Bank Deposits (CV=30.00) and disapprove in the case of equity (CV=32.50). Investors strongly agree that the bank deposits and life insurance policies are the avenues offering regular and steady income than equity. However, their opinion is equal for Mutual Funds and Life Insurance policies (C.V = 31.50). The coefficient of variation finds the investors' opinion based on age relatively stronger in case of bank deposits (CV=30.75) and therefore proves the hypothesis valid in case of bank deposit and disapproves in the case of equity (CV=45.67) and mutual funds (CV= 45.00). The returns on bank deposits are definite and regular. As a result, it has greater favorableness among investors. On the other hand, the return on equities and mutual funds are volatile indeterminable. As a result, investors' perception of regular and steady income becomes fragile in this case. The variable education, investors agree with equity shares (CV 33.50) very strongly, mutual funds (CV 33.75) and life insurance policies (CV 34) which have potential for capital appreciation whereas their opinion is very weak with regard to bank deposits (CV 39.00). Hypothesis is proved in case of equity shares (CV=33.50) and disapproved in case of bank deposits (CV=39.00). The variable occupation is very strong for life insurance policies (CV 32.50) and disapproving with Bank Deposits, Occupation and Mutual Funds with almost equal capacity (CV 45.33). This may be because investors are looking for tax benefits on life insurance policies. Though tax benefits are available for mutual funds but awareness is less among the investors compared to life insurance policies. The variable income has strong association with Bank Deposits (CV 36.75) than the other. The transaction costs being minimum in the case of bank deposits, easy access of bank branches, convenient online banking are some of the perceptions for this. The income based investors are generally safe players who is not intended to take risk for their earning.

To test the third hypotheses of the study that is to find that there is no significant relationship among investors'

Demographs based' on age, gender, occupation and education on different investment avenues, binary logistic regression has been conducted with the help of SPSS package. Logistic regression works well on non-linear relationships between dependent and independent variables. In this study the dependent variables are dichotomy. The below table 5 depicts the results of influence of age, gender, occupation and education on Bank deposits. The

dependent variable is Bank deposits and independent variables are age, gender, occupation and education. Wald significance values are less than .05 for age (.026) and gender (.049), occupation (.050) and more for education (1.000) which rejects the null hypotheses for all the three but not for education. This proves that bank deposits is dependent on age, gender and occupation except education.

Table 5. Bank Deposits VS Age, Gender, Occupation and Education

|                       |                     | В              | S.E.        | Wald          | df            | Sig.            | Exp(B)       |
|-----------------------|---------------------|----------------|-------------|---------------|---------------|-----------------|--------------|
|                       | Age                 | 140            | .401        | 3.123         | 1             | .026            | .869         |
|                       | Gender              | 1.405          | .773        | 3.302         | 1             | .049            | 4.076        |
| Step 1 <sup>a</sup>   | Occupation          | 025            | .566        | 4.002         | 1             | .050            | .976         |
|                       | Education           | 2.224          | .733        | 2.000         | 1             | 1.000           | 6.886        |
|                       | Constant            | -2.443         | .633        | 2.000         | 1             | 1.000           | .000         |
| <b>C</b> (1) <b>O</b> | Bank                | 1.000          | 105         | 21.050        | 1             | 050             | 227          |
| Step 0                | Deposits            | -1.089         | .195        | 31.058        | 1             | .050            | .337         |
| a. Va                 | riable(s) entered o | n step 1: Age, | Gender, Occ | upation, Educ | cation. Signi | ificance at 1 p | ercent level |

The below table 6 depicts the results of influence of age, gender, occupation and education on mutual funds. The dependent variable is mutual funds and independent variables are age, gender, occupation and education. Wald significance values are less than .05 for age (.045), gender (.047), occupation (.041) and for education (.020) which duly rejects the null hypotheses. This proves that mutual funds are dependent on age, gender and occupation and education.

Table 6. Mutual Funds Vs Age, Gender, Occupation and Education

|                     |   | В       | S.E.  | Wald   | df | Sig.  | Exp(B) |  |  |
|---------------------|---|---------|-------|--------|----|-------|--------|--|--|
|                     | Age   | 260     | .463  | .314   | 1  | .045  | .771   |  |  |
|                     | Gender  | .418    | .582  | .517   | 1  | .047  | 1.519  |  |  |
| Step 1 <sup>a</sup> | Occupation  | -1.094  | .536  | 4.157  | 1  | .041  | .335   |  |  |
|                     | Education   | 22.879  | 4.933 | .000   | 1  | .020  | 8.003  |  |  |
|                     | Constant  | -20.268 | 4.933 | .000   | 1  | 1.000 | .000   |  |  |
| Step 0              | Mutual Funds  | 1.469   | .218  | 45.630 | 1  | .000  | 4.346  |  |  |
| a. Variat           | a. Variable(s) entered on step 1: Age, Gender, Occupation, Education. Significance at 1 percent level |         |       |        |    |       |        |  |  |

The below table 7 depicts the results of influence of age, gender, occupation and education on equity. The dependent variable is equity and independent variables are age, gender, occupation and education. Wald significance values are less than .05 for age (.009.), gender (.030), occupation (.020) and more for education (1.000) which duly rejects the null hypotheses for all the first three variables except for education. This proves that equity is dependent on age, gender and occupation but not for education.

|                     |                      | В                | S.E.            | Wald           | Df           | Sig.          | Exp(B) |
|---------------------|----------------------|------------------|-----------------|----------------|--------------|---------------|--------|
|                     | Age                  | .259             | .493            | .276           | 1            | .009          | 1.296  |
|                     | Gender               | .625             | .791            | .623           | 1            | .030          | 1.867  |
| Step 1 <sup>a</sup> | Occupation           | .738             | .586            | 1.587          | 1            | .020          | 2.092  |
|                     | Education            | 19.544           | 4.049           | .000           | 1            | 1.000         | 37.829 |
|                     | Constant             | -22.825          | 4.049           | .000           | 1            | 1.000         | .000   |
| Step 0              | Equity               | -1.726           | .237            | 53.119         | 1            | .000          | .178   |
| a. Variab           | le(s) entered on ste | p 1: Age, Gender | , Occupation, l | Education. Sig | nificance at | 1 percent lev | el     |

Table 7. Equity Vs Age, Gender, Occupation and Education

The below table 8 depicts the results of influence of age, gender, occupation and education on life insurance policy. The dependent variable is life insurance policy and independent variables are age, gender, occupation and education. Wald significance values are much different compared to other avenues discussed above. Age and occupation are evident with .007 and .008 significance values that rejects the null hypotheses proving there is an influence on life insurance policy. Gender and education are accepting the null hypotheses with .998 and 1.000 significance values.

|                     |                      | В                | S.E.            | Wald           | df           | Sig.           | Exp(B)  |
|---------------------|----------------------|------------------|-----------------|----------------|--------------|----------------|---------|
|                     | Age                  | 7.073            | .638            | .200           | 1            | .007           | .006    |
|                     | Gender               | 6.581            | .038            | 5.016          | 1            | .998           | .000    |
| Step 1 <sup>a</sup> | Occupation           | 15.968           | .748            | 3.004          | 1            | .008           | 3.184   |
|                     | Education            | .392             | .686            | 1.000          | 1            | 1.000          | .676    |
|                     | Constant             | 4.743            | 4.637           | 1.000          | 1            | 1.000          | 114.749 |
| Step 0              | Constant             | 4.927            | 1.004           | 24.103         | 1            | .000           | 138.000 |
| a. Variabl          | e(s) entered on step | o 1: Age, Gender | , Occupation, I | Education. Sig | nificance at | 1 percent leve | el      |

Table 8. Life Insurance Policy Vs Age, Gender, Occupation and Education

#### 5. Conclusion

The study is especially relevant for the financial advisor and consultants. The insight of how an investment choice gets affected by the demographic variables and perceptions helps the financial advisors to advise their clients better. The clients, on the other hand on being advice regarding the investments that suit their profile will not only rate such an advice higher but will also appreciate it. The study recommends that there is a need to help investors develop a right perspective of the investment schemes and their attributes. More similar studies should be undertaken with diverse samples at different locations and from time to time in order to be aware with the latest preferences of the investors. The study thus, will certainly improve the mutual trust between the advisor and his client.

#### References

- Ahmad, A., Aswan, N., Ali, M. & Tabasum, A. (2011). How demographic characteristics affect the perception of investors about financial risk tolerance. *International Journal of Contemporary Research in Business*, 3(2), 412-417.
- Barber, B. M., & Odean, T. (2001). Boys will be boys: Gender, overconfidence, and common stock investment. *Quarterly Journal of Economics*, 116, 261–292. https://doi.org/10.1162/003355301556400
- Charness, G., Gneezy, U. (2007). Strong Evidence for Gender Differences in Investment. Working Paper: Economics Department, University Of California, Santa Barbara, and Ca.
- Chin, A.L.L. (2012). Psychological Biases and Investor Behavior: Survey Evidence from Malaysian Stock Market. International Journal on Social Science Economics and Art, 2.
- Chira, I. and B. Thornton. (2008). Behavioral Bias within the Decision Making Process. Journal of Business and

Economics Research, 6, 8-11.

- Diacon, S. (2004). Investment risk perception: do consumers and advisers agree?. *The International Journal of Bank Marketing*, 22(3), 180-198. https://doi.org/10.1108/02652320410530304
- Eckel, C. Grossmann C. (2001). Chivalry and solidarity in Ultimatum Games. *Economic Inquiry*, 39(2), 171-188. https://doi.org/10.1111/j.1465-7295.2001.tb00059.x
- Fisher, P.J. (2010). Gender differences in personal savings behaviors. *Journal of Financial Counseling and Planning*, 21(1), 14-24.
- Graham, J.R., Stendardi, E.J. Jr, Myers, J.K. & Graham, M.J. (2002). Gender differences in investment strategies: an information processing perspective. *International Journal of Bank Marketing*, 20(1), 17-26. https://doi.org/10.1108/02652320210415953
- Grinblatt, M., & Keloharju, M. (2000). The investment behavior and performance of various investor types: A study of Finland's unique data set. *Journal of Financial Economics*, 55, 43–67. https://doi.org/10.1016/S0304-405X(99)00044-6
- Shefrin Hersh (2008). Ending the management illusion. New York:McGraw-Hill.
- Iman, Z. (2011). Study of Effectiveness models in optimal portfolio of shares. *Middle East Journal Scientific Research*, 10(2), 239-246.
- Miller. Edward M M. (1977). Risk uncertainty and divergence of opinion. *Journal of Finance, 32*, 1151-1168. https://doi.org/10.1111/j.1540-6261.1977.tb03317.x
- Powell & Ansic D. (1997). Gender Differences in Risk Behavior in financial Decision-Making: An Experimental Analysis. *Journal of Economic Psychology*. https://doi.org/10.1016/S0167-4870(97)00026-3
- Rana, H.M., S. Murtaza, F. Noor, Inam-u-din & K. Rehman. (2011). Effects of Demographic Factors on Risky Decision-Making Behavior. *European Journal of Social Sciences*, 25(3), 69-76.
- Riley W B (Jr) & Chow V K. (1992). Asset Allocation and Individual Risk Aversion. *Financial Analyst Journal*. https://doi.org/10.2469/faj.v48.n6.32
- Smith, A.L. & Harvey, T.W. (2011). Test of a theory: an empirical examination of the changing nature of investor behavior. *Journal of Management Policy and Practice*, 12(3), 49-68.
- Shleifer, Andrei & Robert Vishny. (1977). The limits of arbitrage. *Journal of Finance*, 52, 35-56. https://doi.org/10.1111/j.1540-6261.1997.tb03807.x
- Stendardi, E.J., Graham, J.F. & O'Reilly, M. (2006). The impact of gender on the personal financial planning process: should financial advisors tailor their process to the gender of their client. *Humanomics*, 22(4), 223-238. https://doi.org/10.1108/08288660610710746
- Wang, M., Keller C., Siegrist, M. (2011). The Less You Know, the More You Are Afraid Of A Survey on Risk Perceptions of Investment Products. *The Journal of Behavioral Finance*, 12(1), 9-19. https://doi.org/10.1080/15427560.2011.548760
- Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-attitude scale: Measuring risk perceptions and risk behaviors. *Journal of Behavioral Decision Making*, 15, 263–290. https://doi.org/10.1002/bdm.414