

Factors Influencing Investment Decisions of Individual Investors

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Investment decisions are based on investor's psychology than on rational decision making. The study focuses on the factors influencing investment decisions of investors in the Indian capital market, with a sample size of 250 respondents using ANOVA, factor analysis, and t-test for hypothesis testing. The variable can be grouped in eight summary factors which captured investor's decisions. The results point out that the most impelling factors on investment decisions of investors are: financial requirements, advice and recommendations, firm's image, share price, dividend attraction, macro and micro analysis, higher earning perspective and sector performance. The study also found that gender and the demographic characteristics of investors statistically and significantly influence the investment choices of investors.

Keywords: Investment, Factors influencing investment decisions, Capital market, Investor behaviour, Stock market.

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1. Introduction

Almost everyone makes investments. Those investments are not just in assets such as shares and bonds, but also through participation in pension plan, employee saving programme, life insurance, real estate, banks, post office saving

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schemes, etc. Many are attracted to investments because they can participate in the decision-making process and see the results of their choice. Not all investments will be profitable, as the investor need not always take the right investment decisions. However, one should earn a reasonable return by having a diversified asset portfolio. The choice of portfolio of investments is influenced by various factors. What are the main factors that influence investors in their choice of assets?

The behaviour of individual investor is determined by a range of psychological factors. The arena of behavioral finance has grown over the recent years and is now commonly used to explain investment in stocks. The present study examines certain behavioural factors that exert large influence on individual equity investor's decisions, and also to investigate whether these factors are related to the investor's gender and demographic features.

2. Review of literature

Mojgan and Ali (2011) studied investor decision making in the Tehran stock market, and found that two factors, i.e. earnings per share and cash dividends influenced investors' decision to buy stocks. Similarly, Azam and Kumar (2011) examined the factors influencing Pakistan investors' behaviour on the Karachi stock exchange and found that the earnings per share, foreign direct investment and growth rate of gross domestic product have a significant impact on stock prices. Merikas, Merikas, Vozikis, and Prasad (2008), Masomi and Ghayekloo (2011), and Fares and Khamis (2011) also investigated factors influencing investor decisions in different stock markets.

Shaikh and Kalkundrikar (2011) studied the demographic effect on investment decisions. Similar studies were done by Geetha and Ramesh (2012). According to these authors, investor's age, education, and his/her accessibility to the internet had a significant impact on stock trading. The studies stated that the age and gender are the factors which affect individual investment decisions and differences in the perception of investors. Obamuyi (2013) tried to find the main factors influencing the decisions of investors and how these factors are related to the investors' socio-economic characteristics in the Nigerian capital market. The study shows that the most important factors determining investment decisions are the past performance of the company's stock, dividend policy, expected corporate earnings and the get-rich-quick mentality. Also, these are, in turn, influenced by factors

comprising religion, loyalty to the company's products/services, opinions of members of the family and expected losses in other investments. The study finds, therefore, that socio-economic characteristics of investors significantly influence the investment decisions of investors in Nigeria.

Nagy and Obenberger (1994) studied the importance of different factors in individual's investment decisions and found that the classical wealth-maximization criterion is most important to investors when choosing stocks. Al-Tamimi (2005) investigated the factors influencing individual investor behaviour on the United Arab Emirates (UAE) financial markets. The study revealed six important influencing factors in order of importance as: the expected corporate earnings, get-rich-quick attitude, stock marketability, past performance of the firm's stock, government holdings, and the presence of organised financial markets. The author also found the least-influencing factors to be: the expected losses in other local investments, risk minimization, expected losses in international financial markets, family-member opinions and gut feeling on the economy. Hussain and Nasrin (2012) found that the eight most-important factors influencing investors are: the company specific attributes/reputation, net asset value, accounting information, trading opportunity, publicity, ownership structure, influence of people and the personal-finance needs.

Aregbeyen and Mbadiugha (2011) found that ten most-influencing factors on investor's decision in order of importance are: motivation by people who have attained financial security through share investments; future financial security; recommendations by reputable and trusted stock brokers; management team of the company; awareness of the prospects of investing in shares; composition of the board of directors of companies; recent financial performance of the company; ownership structure of the company; reputable predictions of future increment in share value; and bonus payments.

The consensus from the review of literature above is that investors' investment decisions are based on a number of factors. Most notably, investors' decisions are influenced by wealth-maximizing factors such as corporate earnings, get-rich-quick attitude, dividend policy, past performance of the firm's stock and other factors related to the investor's socio-economic characteristics and accounting information.

3. Data and Methodology

3.1 Objectives

The main objective of the study is to determine the most influencing factors on investment decisions of investors. The study also aims to find out whether there exists a gender difference in investors' decisions and investigate the effect of demographic characteristics of investors on any of the most important factors.

3.2 Hypotheses

Based on the objectives of the study, the following hypotheses were formulated:

- (1) There is no significant difference between the factors that influence investment decisions of investors and the gender.
- (2) There is no significant difference between demographic characteristics of investors and their investment decisions.

3.3 Data

To accomplish the aforementioned research objectives, data are collected through a structured questionnaire survey of 250 investors from the union territory of Puducherry. The respondents were selected using the convenient sampling method. ANOVA, t-test, and factor analysis have been applied for data analysis.

4. Demographic Profile of the Sample Respondents

Demographic and economic characteristics of the respondents such as age, marital status, profession, education, occupation, and monthly income are depicted in Table 1. About 80 per cent of the respondents were men, and about 20 per cent were women. On an average, respondents were thirty five years old. It can be seen that 45.5 per cent of men and 64 per cent of women were under the age of thirty five. The majority of the respondents were married (80 per cent). Among them, 82 per cent were men and 18 per cent women. About 40 percent of the respondents held a bachelor's degree. Gender differences in levels of education were reported separately. With regard to occupation, slightly less than half (41.6 per cent) of the respondents were employed personnel. They were engineers, managers, teachers, share brokers and businessmen. A 16.8 per cent indicated that they held managerial positions such as financial analyst,

Table 1: Demographic Characteristics

Variable	All		Men		Women	
	Number	%	Number	%	Number	%
	250	100	200	80	50	20
Age						
26 - 30 Years	59	23.60	34	57.63	25	42.37
31 - 35 Years	64	25.60	57	89.06	7	10.94
36 - 40 Years	52	20.80	49	94.23	3	05.77
41 - 45 Years	12	04.80	10	83.33	2	16.67
46- 50 Years	26	10.40	20	76.92	6	23.08
51 and Above	37	14.80	30	81.08	7	18.92
Marital Status						
Single	40	16.00	32	80.00	8	20.00
Married	200	80.00	164	82.00	36	18.00
Others	10	02.00	4	40.00	6	60.00
Education						
Master's degree	68	27.20	51	68.92	17	25.00
Bachelor's degree	100	40.00	89	89.00	11	11.00
Vocational or technical school	34	13.60	24	70.59	10	29.41
High school or equivalent	36	14.14	30	83.33	6	16.67
Less than high school	12	04.80	6	50.00	6	50.00
Occupation						
Professional	42	16.80	30	71.43	12	28.57
Business	78	31.20	76	97.44	2	02.56
Employee	104	41.60	74	71.15	30	28.85
Retired	16	06.40	13	82.50	3	08.75
Others	10	04.00	7	70.00	3	30.00

Monthly Income (Rupees)						
Up to 10000	47	18.80	41	87.23	6	12.76
10001 – 25000	130	52.00	101	77.69	29	22.31
25001 – 50000	56	22.40	45	80.36	11	19.64
Above 50000	17	06.80	13	76.47	4	23.53

accountant, executive, educational administrator, and manager. As can be seen from the table, 52 per cent of the respondents' monthly incomes were between Rs. 10,000 and Rs. 25, 000. A 6.8 per cent of the respondents were in the highest-income category of more than Rs. 50,000 annually. Gender difference is notable here as there were much higher percentages of men in higher income category than women.

5. Identification of Factors

To comprehend the factors influencing the investment decision of investors, we have identified 37 statements. Each statement explains one characteristic of interest. The views on investments were collected in the Likert five-point scale. Studying all 37 statements would have been tedious. Therefore, factor analysis was used to reduce the number of variables by determining common dimensions obtainable among them. The variables which had common reply and high correlation were grouped under a common factor. Variables which do not have any significant effect were concealed so that the reduced number of factors should be distinct from each other.

Two tests, namely, the Kaiser-Meyer-Olkin (KMO) test and the Bartlett's test of sphericity, were applied to know the suitability of data for the purpose of factor analysis. The KMO measure of sampling adequacy is a statistic which gives the proportion of variance in the variables which might be caused by new factors. High values generally suggest that a factor analysis may be usefully done. If the value is less than 0.50, the results of the factor analysis probably will not be very useful. Table 2 showing the KMO value at 0.758 signifies that the factor analysis is useful for the data. The chi-square value for Bartlett's test of sphericity is 467.007 and the significance value is 0.000 which is significant at more than 99 percent level of confidence. This means data are very suitable for the factor analysis.

Table 2: KMO Value

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.758
Bartlett's Test of Sphericity (Approx. Chi-square)	467.007
d.f.	6.000
Sig.	0.000

The subsequent phase in the process is to decide on the number of factors to be derived. The rule of thumb is applied to select the number of factors for which eigenvalues with greater than one is taken by using principal component analysis method. The component matrix so formed is further rotated orthogonally using varimax rotation algorithm by performing factor analysis. The 37 variables are first reduced to 22 variables and then further reduced to eight component factors (Table 3). Each component factor contains some statements which are otherwise called variables. Each variable signifies the perception of investors about one particular aspect of investment variable like investment institutions and statements under each factor explain the feature of such perceptual factor. The eight perceptual factors which have eigenvalue more than unity alone is taken for consideration. These are recorded in Table 3. Factor loading of each factor is summarized in Table 4.

Table 3: Perceptual Factors with Percentage of Variance Explained

Factors	Eigenvalue	% Variance Explained	% Cumulative Variance
Financial Requirements	3.513	31.414	31.414
Advice and Recommendations	2.833	2.913	54.327
Firm's Image	2.217	15.879	70.206
Share Price	1.897	11.206	81.413
Dividend	1.708	8.850	90.263
Analysis	1.348	4.354	94.617
Return	1.257	3.215	97.832
Sector Performance	1.173	2.168	100.000

The first and the foremost factor is ruled by considerations of financial requirements, which includes fulfilling emergency financial needs, future financial requirements, and also money to meet present family needs. Of these items, future financial needs were the second most important criterion for individual investors. The other variables in this factor were of less weight to respondents. The second factor that influences the investment decision is advice and recommendations. This factor comprises purchase recommendations from friends and relatives, individual stock brokers, etc. Recommendations from agency and financial advisor marginally loaded on this factor. Each of these information sources could be interpreted as a recommendation from sources which consider the interests of investor's definitive actions.

Although many investors obviously rely on professional expertise, most investors in the sample are apparently cautious of this information channel. Firm's image comes next. Variables that loaded heavily on this construct include firm reputation, firm status, market status and popularity of firm's products and services. Each of these variables is a value statement about the firm, generated by the individual. In that, all but firm reputation rank highly for investment decisions. And it might be concluded that many investors choose stocks based on qualitative criteria. This presents a formidable challenge to an investment community accustomed to quantitative analysis and communication of the relative values of securities. Another major factor that influences the investment decisions is the share price. Variables that incorporated this factor are share price, affordability of share price, and P/E ratio. Each of these is a popular investment criterion. The affordability of share price loaded heavily on this construct. Dividend constitutes a major factor in decision making. Variables that are included in this factor are dividend announcements, and investment before and after ex-date dividend. Variable which has got high loading was the dividend policy factor. Investors also consider reports of company analysis, analysis of the economy and industry. As wealth maximization and quick returns are important objectives of investment, investors obviously look at the earning factor as well. Earning factors are present in stock-index return and capital appreciation. Appreciation in invested capital is heavily loaded. The eighth and final factor influencing was sector performance. Modern investors also prefer to invest as the performance of sectors such as banking, infrastructure and pharma were considered as safe and stable. Booming sectors are heavily loaded as well.

Table 4: Factor Loading for All Variables

Factor Identification	Variables	Factor Loading
Sector Performance	Investing as the banking sector is performing well	0.533
	Investing as the infrastructure sector is forecasto do well	0.877
	Investing as the sector pharma is safe	0.753
Macro and Micro	If my economic analysis is satisfactory, I will make investment	0.888
	I invest based on industrial analysis report	0.76
	Company analysis is influencing my decision on investment	0.901
	I enquire about past trends and accordingly invest	0.739
Advice and Recommendations	Take recommendations fromfamily friends before investments	0.789
	Take suggestions from financial advisor before investments	0.668
	Take advice from agency andfinancial advisor before investments	0.854
Dividend Attraction	I will invest in shares immediately after dividend announcement	0.592
	I will invest in shares before ex-date dividend	0.584
	I will invest in shares after ex-date dividend	0.645
	Dividend policy of company	0.701
Firm's Image	I will see firm's reputation	0.823
	I will check firm's status	0.705

	Market status of firm's product and services	0.799
Higher Earning Perspective	Stock-index returns	0.637
	Investing for appreciating the invested capital	0.775
	To get more return	0.529
Financial Needs	To fulfill emergency financial needs	0.765
	Investing for my future needs	0.706
	Investing to meet family needs	0.782
Share Price	Based on share price I invest	0.812
	Share price affordability constitute a major role in investment	0.823
	I look at P/E ratio for my investment	0.806

6. Gender and Factors Influencing Investment Decisions

The results of the independent t-test (Table 5) reveal that there was a statistically significant difference in gender in the assessing the factors of advice and recommendations $\{t = 1.504, p = .009\}$, firm's image $\{t = 2.781, p = .005\}$, share price $\{t = 2.865, p = .003\}$, dividend attraction $\{t = 2.247, p = .004\}$, macro and micro analysis $\{t = 2.191, p = .003\}$, and sector choice $\{t = 2.521, p = .007\}$. For instance, results indicate that male investors reported significantly higher preference for financial needs of the company's stock ($M = 4.51$) than did the females ($M = 3.98$). The results imply that the gender of investor matters when making investment decisions based on the advice and recommendations, firm's image, share price, dividend, macro and micro analysis and sector performance. However, it was observed that the assessing factors of financial needs $\{t = 2.193, p = .179\}$ and maximum return $\{t = 2.885, p = .094\}$ has no significant difference for gender. This is reasonable because both males and females are equally ambitious and expectant of good future gains from their investments.

Table 5: T-test for Influence of Gender on the Respondents in Eight Most Influencing Factors

Factors	Mean Value		t- value	Sig.
	Male	Female		
Financial Needs	4.51	3.98	2.193	0.179
Advice and Recommendations	4.22	3.95	1.504	0.009
Firm's Image	4.13	3.92	2.781	0.005
Share Price	3.98	3.83	2.865	0.003
Dividend Attraction	3.95	3.75	2.247	0.004
Micro and Macro Analysis	3.88	3.63	2.191	0.003
Higher earning perspective	3.76	3.52	2.885	0.094
Sector Performance	3.21	3.01	2.521	0.007

7. Age and Factors Influencing Investment Decisions

The results of the one-way ANOVA test between the different age groups and the eight most influencing factors are shown in Table 6.

Table 6: Influence of Age on Investors' Investment Decisions

Factors	Sum of Squares	d.f.	Mean Square	F Ratio	Sig.
Financial Needs	33.801	5	6.761	8.881	0.001
Advice & Recommendations	21.799	5	4.359	5.167	0.001
Firm's Image	36.992	5	7.398	7.832	0.001
Share Price	26.997	5	5.399	5.886	0.001
Dividend Attraction	26.899	5	5.379	5.748	0.001
Micro and Macro Analysis	21.788	5	4.358	5.101	0.001
Higher Earning Perspective	37.934	5	7.587	8.271	0.000
Sector Performance	21.802	5	4.360	5.402	0.001

The results indicate that there is a statistically significant difference among the different age groups and each of the eight most influencing factors [financial needs { $F = 8.881, p = .001$ }; advice and recommendations { $F = 5.167, p = .001$ }, firm's image { $F = 7.832, p = .001$ }, share price { $F = 5.886, p = .001$ }, dividend attraction { $F = 5.748, p = .001$ }, micro and macro analysis { $F = 5.101, p = .001$ } higher earning perspective { $F = 8.271, p = .000$ } and sector performance { $F = 5.402, p = .001$ } at five per cent significance level. This shows that age is a factor affecting investment decisions of Indian investors.

8. Marital Status and Factors Affecting Investment Decisions

Results of one-way ANOVA between the different marital groups of respondents and the most influencing factors are shown in Table 7.

Table 7: Influences of Marital Status on Investors' Investment Decisions

Factors	Sum of Squares	d.f	Square Mean	F Ratio	Sig.
Financial Needs	27.523	2	13.7615	17.958	0.001
Advice and Recommendations	22.969	2	11.4845	13.839	0.001
Firm's Image	21.743	2	10.8715	11.289	0.001
Share Price	15.826	2	7.9130	8.521	0.001
Dividend Attraction	22.113	2	11.0565	12.231	0.001.
Micro and Macro Analysis	16.882	2	8.4410	9.536	0.001
Higher Earning Perspective	23.241	2	11.6205	13.943	0.000
Sector Performance	21.802	2	10.9010	11.302	0.001

Statistically significant difference was found for all the eight most influencing factors [financial needs { $F = 17.958, p = .001$ }; advice and recommendations { $F = 13.839, p = .001$ }, firm's image { $F = 11.289, p = .001$ }, share price { $F = 8.521, p = .001$ }, dividend attraction { $F = 12.231, p = .001$ }, micro and macro analysis { $F = 9.536, p = .001$ }, higher earning perspective { $F = 13.943, p = .000$ } and sector performance { $F = 11.302, p = .001$ } based on the different marital groups of the investors at five per

cent significance level. However, an analysis of the means shows that investors who are other than single and married ($M = 3.00, SD = 1.308$) and single ($M = 3.63, SD = 1.011$) reported significantly less attraction to financial needsthan those who are married. This point out that marital status is a factor affecting investment decisions.

9. Educational Qualifications and Factors Affecting Investment Decisions

Table 8 describes the results of one-way ANOVA between educational groups of respondents and the eight influencing factors.

Table 8: Influences of Educational Qualifications on Investment Decisions

Factors	Sum of Squares	d.f	Square Mean	F Ratio	Sig.
Financial Needs	18.625	4	4.65625	5.804	0.001
Advice and Recommendations	15.131	4	3.78275	4.385	0.001
Firm’s Image	14.151	4	3.53775	3.546	0.001
Share Price	15.221	4	3.80525	4.411	0.001
Dividend Attraction	14.162	4	3.5405	3.561	0.001
Micro and Macro Analysis	12.521	4	3.13025	3.302	0.001
Higher Earning Perspective	18.941	4	4.73525	4.835	0.000
Sector Performance	12.721	4	3.18025	3.359	0.001

The eight most influencing factors of financial needs { $F = 5.804, p = .001$ }; advice and recommendations { $F = 4.385, p = .001$ }, firm’s image { $F = 3.546, p = .001$ }, share price { $F = 4.411, p = .001$ }, dividend attraction { $F = 3.561, p = .001$ }, micro and macro analysis { $F = 3.302, p = .001$ }, higher earning perspective { $F = 4.835, p = .000$ } and sector performance { $F = 3.359, p = .001$ } showed significant difference among the different educational groups at five per cent significance level. This discloses that education is a factor

affecting decisions of investors. However, an analysis of the means shows that investors with master's degree ($M = 4.31$, $SD = .815$) and bachelor's degree ($M = 4.02$, $SD = .885$) reported significantly more attraction to financial needs than those with vocational or technical school ($M = 3.78$, $SD = .990$), high school or equivalent ($M = 3.67$, $SD = .982$) and less than high school ($M = 3.44$, $SD = .912$). This indicates that education is a factor affecting the decisions of investors.

10. Conclusion

Investment decisions are influenced by certain identified factors. The most important principal factors are financial requirements, advice and recommendations, firm's image, share price, dividend attraction, analysis, maximizing return and sector performance. These factors are significantly influenced by gender, age, marital status and educational qualification of investors in the Indian capital market. Specifically, the investment decisions relating to certain factors differ based on their gender difference. Thus, policy makers can recognize the factors that appeal to different groups and segments of investors in an attempt to make the investment environment and market environment friendly and attractive to the investors. The results of this study can be used by developing-country policymakers to promote an improved investment climate.

11. Limitations

Certain limitations are likely to be there in the study. Since the study is sample based and undertaken in the union territory of Puducherry, the findings of the study may have the limitation of generalization for the entire population. Despite the care taken to understand the interests and opinions of the respondents, some articulation error may have crept into the study. Some respondents may not be aware of certain latest procedures and aspects of the stock market. A few respondents were hesitant to give details. Also there might be some bias in the answers given by the respondents. The conclusion may not be generalized since the study is confined only to the union territory of Puducherry.

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