



# Factors Determining Investor's Behaviour in Stock Market

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## 1. Preface

During the past couple of years, the capital markets have been characterized by increasing volatility and fluctuations. Individual investors do find difficulties due to the the erratic movements of prices of stock. This unpredictability and uncertainty triggers the importance to know the factors behind investors behaviour in stock market as the market movements cannot always be judged with the help of standard financial measures and tools.

Individual investor is an investor who trades on his own behalf and accounts for a small amount of transactions, and who tries to manage his own funds with little or no professional support (Karan, 2004). It can be shown that individual investors are generally investors who invest in their own names and accounts, whose transaction amounts are relatively small, and that they are affected by a number of personal, financial and environmental factors in the investment decisions of individual investors (Elmas, 2010) Individual investors are under the influence of three main factors, personal, financial and environmental, while making investment decisions. According to Benartzi and Thaler (2007) representativeness bias, overconfidence, availability bias, anchoring bias, and gamblers' fallacy are the behavioural bias in investment. According to Russo and Schoemaker (1992), overconfidence occurs when someone believes in their knowledge and judging abilities without any recommendations from other people. Anchoring bias occurs when people rely too much on pre-existing information or the first information they find when making decisions. The investor first considers initial existing values, a result of some partial calculation or the thought of itself, before making a final decision (Tversky & Kahneman, 1974).

The Gambler's fallacy stems from our tendency to assume that if a random event has occurred many times in the past that it will occur more or less often in the future (Boynton, 2003). Tversky and Kahneman (1974) reported that in availability heuristics, the probability of an event is based on cognitive decision-making

abilities as well as knowledge of similar historical events. Additionally they found the presence of prospect variable in making investment decision process. Hamilton and Lin (1996) demonstrated that economic recessions are key to stock market volatility. Besides, investor behavior is influenced by market variables such as the changes in price, news from politics, society, predictions for future trends, information from others, and the vital of stock (Waweru et al., 2008).

Investors and individuals are considered to be rational beings, they are trying to increase their personal interests (Shleifer, 2004). Investment is allocating of monetary resources to assets that are expected to yield some gain or positive return over a period of time (Durga Rao, 2014). The assets may range from safe investment to risky investment. Usul et.al(2002) examined the factors affecting investors' buying and selling of stocks. In their study, it was determined that the factors that investors were most affected by socio-economic variables when buying stocks. It is stated that socio-economic factors refer to personal and environmental changes. The present study attempts to analyse the various factors effecting investor's perception in stock market investment.

## **2. Objectives of the Study**

The study has following objectives;

- 1.To identify the factors influencing the investors' preferences in stock market investment
- 2.To understand mean difference between factors of investor behaviour among male and female investors

## **3. Hypotheses of the Study**

Hypothesis of the study in line with the objectives are following;

1. There is no significant mean difference between male and female investors regarding self efficiency factor
2. There is no significant mean difference between male and female investors regarding company factor
3. There is no significant mean difference between male and female investors regarding skill & knowledge factor
4. There is no significant mean difference between male and female investors regarding risk factor
5. There is no significant mean difference between male and female investors regarding speculative factor
6. There is no significant mean difference between male and female investors regarding return factor
7. There is no significant mean difference between male and female investors regarding forecast factor
8. There is no significant mean difference between male and female investors regarding information and trading factor
9. There is no significant mean difference between male and female investors liquidity factor

## **4. Methodology and Database**

The methodology followed to carry out the research work has been stated below.

### **4.1 Research Design**

The present research work is descriptive and analytical in nature. Cross sectional design has been employed in the present study. Survey has been used for collecting the required data. Data has been collected from the respondents at single point of time.

## 4.2 Primary Data

The present study is based on primary data collected from the individual investors from Kerala.

## 4.3 Sampling Design

The Sample required for the study has been selected using stratified random sampling. The sample of 420 individual investors has selected which consist of 30 individual investors from 14 states of Kerala were selected.

## 4.4 Tool for Data Collection

The primary data required for the study have been collected with the help of specially designed Investors Perception Scale. The scale includes 25 statements regarding investors perception. Respondents are required to indicate their level of agreement on the five point scale range from 5 to 1. The scale rate as 5 (Strongly agree), 4 (Agree), 3 (Neutral), 2 (Disagree) and 1 (Strongly disagree). Internal consistencies of the scale is adequate with a higher Cronbach alpha of 0.88.

## 4.5 Statistical Tools Used for the Analysis

Exploratory factor analysis and t test has been used for data analysis.

## 5. Analysis and Discussion

The exploratory factor analysis has been done to identify and extract the various factors influencing the investor behavior in stock market and t test has been done to analyse gender wise difference in various factors.

### 5.1 Exploratory Factor Analysis

#### 5.1.1 Reliability and Normality of Data

In order to check the internal consistency of scale the reliability the following test has been employed. The reliability analysis of the scale has been done using the cronbach's alpha. The result of reliability analysis is shown in table 1

**Table 1**  
**Reliability Analysis of Scale**

Cronbach's Alpha	N of Items
.763	25

The table 1 show the scale's cronbach's Alpha is .763, which indicates the scale of study of investor behavior in stock market is reliable. The scale's internal consistency is high. Generally internal consistency is satisfied when the cronbach's alpha is higher than 0.7. Hence the scale is consistent.

#### 5.1.2 Identification of factor influencing investor behaviour

In this section an attempt has been made to identify the factors influencing the investor behaviour. This has been done with the help of exploratory factor analysis. The result of Bartlett's Test of Sphericity and Kaiser-Meyer-Olkin for investor behaviour is shown in table 2.

**Table 2**  
**KMO and Bartlett's Test of Sphericity of Investor Behaviour**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.686
Bartlett's Test of Sphericity	Approx. Chi-Square	643.351
	Degree of freedom	300
	Sig.	.000

Table 2 shows the KMO and Bartlett's test. Normally if KMO is higher than 0.5 the sample adequacy is assured. Here it is 0.686 which indicates that the sample is adequate and we may proceed with the Factor Analysis. The result of Bartlett's test of sphericity shows a chi square value of 643.351 with a significance of 0.001. Thus, the value is significant at 0.01 level. It shows that the correlation matrix of investor behaviour is an identity matrix and the variables are unrelated.

### 5.1.3. Eigen Values to Extract Variables

The initial components are the numbers of the variables used in the Factor Analysis.

**Table 3**  
**Details of Total Variance Explained by variable of Investor Behaviour**

Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
V1	4.92	19.70	19.70	4.92	19.70	19.70
V2	2.05	8.21	27.91	2.05	8.21	27.91
V3	1.90	7.61	35.52	1.90	7.61	35.52
V4	1.54	6.15	41.67	1.54	6.15	41.67
V5	1.44	5.77	47.44	1.44	5.77	47.44
V6	1.20	4.80	52.23	1.20	4.80	52.23
V7	1.15	4.59	56.82	1.15	4.59	56.82
V8	1.09	4.36	61.18	1.09	4.36	61.18
V9	1.02	4.07	65.26	1.02	4.07	65.26

Principal Component Analysis.

On the basis of Varimax Rotation with Kaiser Normalization, 9 factors have been extracted. Each factor is constituted of all those variables that have factor loadings greater than 0.5. 24 variables were clubbed into nine factors. These nine extracted factors explained 65.26% of the total variability .

The table 3 shows that the details of total variance explained by variables. The cumulative percentage shows that a total of 65.26% of variance is explained by the original variables. This shows that six unrelated components associated with investor behaviour. The first component explains 19.70% of variance with an Eigen value of 4.92. The next 8.21% of variance in investor behaviour is explained by second component with an Eigen value of 2.05. The third component is extracted a variance of 7.61% with an Eigen value of 1.90. The fourth component is extracted a variance of 6.15% with an Eigen value of 1.54. The fifth component is extracted a variance of 5.77% with an Eigen value of 1.44. The sixth component is extracted a variance of 4.80 % with an Eigen value of 1.20. Subsequently, seventh component is extracted a

variance of 4.59 % with an Eigen value of 1.15. The eighth and ninth components are extracted a variance of 4.07% (Eigen value 1.09) and 4.07% (Eigen value 1.02) from the total variance.

#### 5.1.4 Rotated Component Matrix

The following table shows the various variables that contributed in the composition of each factors.

**Table 4**  
**Rotated Component Matrix of Investor's Behavior**

	Component								
	1	2	3	4	5	6	7	8	9
Q8	.346								
Q2	.403								
Q15	.563								
Q18	.623								
Q19	.782								
Q20	.650								
Q23	.483								
Q9		.649							
Q10		.822							
Q11		.602							
Q12		.512							
Q22			.668						
Q21			.786						
Q3				.557					
Q4				.554					
Q5				.690					
Q6					.844				
Q7					.476				
Q13						.822			
Q14						.477			
Q1						.534			
Q24							.777		
Q16								.512	
Q25								.795	
Q17									.880

*Extraction Method: Principal Component Analysis.*

The above table shows the component matrix of investor behaviour. Twenty five questions relating to investor behaviour were analyzed using the principal component analysis. The analysis yielded nine components from these questions. The cumulative percent of which is 65.26% shows the total variance extracted from the nine components. They are named as follows:

1. The first factor consists of 7 variables and is named as '**self-efficiency**' with the total variance of 4.924 and explained 19.696 per cent of variance.
2. The second factor contains 4 variables and is named as '**company factors**' explained 8.209 per cent of variance from the total variance,
3. The third factor includes 2 variable and named as '**skill & knowledge factor**', which explained 7.614 per cent of variance from the total variance

4. The fourth factor consist of 3 variable and is named as '**risk factor**', which explained 6.145 per cent of variance from the total variance
5. The fifth factor contains 2 variable and is named as '**speculative factor**', which explained 5.771 per cent of variance from the total variance
6. The sixth factor 3 variable and is named as '**return factor**', which explained 4.797 per cent of variance from the total variance
7. The seventh factor contains only 1 variable and is named as '**forecast factor**', which explained 4.590 per cent of variance from the total variance
8. The eighth factor consist of 2 and is named as '**Information and Trading Factor**', which explained 4.360 per cent of variance from the total variance and
9. The ninth factors contain one variable and are named as '**liquidity factor**' and explained 4.074 per cent of variance from the total variance.

## 5.2 Comparison of Mean Difference of Factors among male and Female Investors and Hypotheses testing

In this section mean difference in various factors has been compared among the male and female investors.

**Table 4**  
**Comparison of Mean Difference and Hypotheses Testing**

Factors	Gender	Mean	SD	t	Sig.	H0: Decision
Self Efficiency	Male	40.38	2.01	1.985	0.000*	Rejected
	Female	22.88	3.12			
Company Factor	Male	50.69	2.98	-3.156	0.000*	Rejected
	Female	28.73	4.05			
Skill and Knowledge Factor	Male	70.35	3.02	1.981	.000*	Rejected
	Female	39.86	5.71			
Risk Factor	Male	20.16	1.1	1.99	0.001*	Rejected
	Female	11.42	2.31			
Speculative factor	Male	74.47	9.5	-3.539	0.000*	Rejected
	Female	42.20	8.3			
Return Factor	Male	26.40	3.06	-1.99	.001*	Rejected
	Female	14.96	4.73			
Forecast Factor	Male	10.24	3.45	4.67	0.001*	Rejected
	Female	58.08	8.73			
Information and Trading Factor	Male	31.30	10.16	2.16	0.001*	Rejected
	Female	17.73	9.14			
Liquidity Factor	Male	19.397	3.01	2.11	0.001*	Rejected
	Female	23.251	4.94			

\* 1% level of significance

The mean scores of self-efficiency factor of male is 40.3809 with a standard deviation of 2.01 which is greater than the mean scores of Self efficiency of female which is 22.8825 with a standard deviation of 3.12. The difference is statistically significant at 0.01 level ( $t = 1.985, p \geq 0.001$ ). As there is significance difference between male and female investors self-efficiency the hypothesis has been rejected.

The mean scores of company factor of male is 50.69 with a standard deviation of 2.98 which is greater than the mean scores of Skill & knowledge of female which is 28.73 with a standard deviation of 4.05. The difference is statistically significant at 0.01 level ( $t = -3.156$ ,  $p \geq 0.001$ , significant). As there is significance between male and female investors company factor the hypothesis has been rejected.

The mean scores of Skill & knowledge of male is 70.35 with a standard deviation of 3.02 which is greater than the mean scores of Skill & knowledge of female which is 39.86 with a standard deviation of 5.71. The difference is statistically significant at 0.01 level ( $t = 1.981$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors skill & knowledge the hypothesis has been rejected.

The mean scores of Risk Factor of male is 20.16 with a standard deviation of 1.1 which is greater than the mean scores of Risk Factor of female which is 11.42 with a standard deviation of 2.31. The difference is statistically significant at 0.01 level ( $t = 1.99$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors risk factor the hypothesis has been rejected.

The mean scores of Speculative factor of male is 74.47 with a standard deviation of 9.5 which is greater than the mean scores of Speculative factor of female which is 42.20 with a standard deviation of 8.3. The difference is statistically significant at 0.01 level ( $t = -3.539$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors speculative factor the hypothesis has been rejected.

The mean scores of Speculation factor of male is 26.40 with a standard deviation of 3.06 which is greater than the mean scores of Return factor of female which is 14.96 with a standard deviation of 4.37. The difference is statistically significant at 0.01 level ( $t = -1.99$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors speculative factor the hypothesis has been rejected.

The mean scores of Forecast Factor of male is 10.24 with a standard deviation of 3.45 which is greater than the mean scores of Forecast Factor of female which is 58.08 with a standard deviation of 8.73. The difference is statistically significant at 0.01 level ( $t = 4.67$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors return factor the hypothesis has been rejected.

The mean scores of Access to Information and Trading factor of male is 31.30 with a standard deviation of 10.16 which is greater than the mean scores of Access to Information and Trading factor of female which is 17.73 with a standard deviation of 9.14. The difference is statistically significant at 0.01 level ( $t = 2.16$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors access to information and trading factor the hypothesis has been rejected.

The mean scores of Liquidity factors of male is 19.39 with a standard deviation of 3.01 which is greater than the mean scores of Liquidity factors of female which is 23.251 with a standard deviation of 4.94. The difference is statistically significant at 0.01 level ( $t = 2.11$ ,  $p \geq 0.001$ , is significant). As there is significance between male and female investors return factor the hypothesis has been rejected.

## Conclusion

The results of the study have brought out the various factors influencing the investor behavior in stock market. The study pointers the influence of various demographic factors and also found nine major factors that influence the investor behavior in stock market. They are self-efficiency, company factors, skill and

knowledge factors risk factor, speculative factor, return factor forecast factor, information and trading factors and lastly liquidity factors. The study also found that there is a significant mean difference between male and female investors in all the nine factors.

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