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## Investors' Behavior and Preference: A Case Study of Indian Stock Market

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### Abstract:

Finance has been studied around the globe from ages but the dimensions of behavioral science have been related with finance only a few decades before. This led to evolution of behavioral finance, where effect of human emotions, cognitive errors and psychology on investment decision is studied. The main objective of this study was to explore the individual investors' investment preference i.e., utilitarian or value-expressive. Moreover, the extent to which their investment decision is dominated by their investment preference has been studied. The relationship between demographic factors and investment preference of an individual has also been examined. The results show that the individual investors at Indian stock exchange, in general, are more value-expressive than utilitarian. Their investment decisions are affected by many behavioral biases as well as with certain demographic factors.

**Keywords:** Behavioral biases, Behavioral finance, Indian investors, Utilitarian, Value-expressive

### 1. Introduction

Since the existence of human, they have seen changes all around themselves. The very survival of human is a proof of their adaptability towards the dynamic environment. It is because of the various discoveries made by humans, they were able to adapt and evolve. Money is considered to be queen among all the discoveries. It has become the necessity for the survival of human. Thus, individuals hold money for various motives. Savings are the outcome of one such motive. The value of the money saved depreciates if it remains idle or not invested. The reason for this depreciation might be inflation, change in interest rate, and many more. So investment has a key role for an individual to both plan and fulfill his future monetary requirement. There is plethora of opportunities available for an individual at various investment avenues. An equity market is one of the most recognized among such avenues as it provides investors an effective place to invest their saved money. Investment helps both the investors and the organizations. While for investors equity market is a great avenue for investment; for the companies it is a great place to raise funds. Together they are expected to form an efficient capital market, which symbolizes an efficient economy.

#### 1.1. Background

With the burst of dot-com bubble in late nineties, the investors felt a strong need to re-examine their rules of investing. This need became even firm with the bursting of speculative technology bubble in March 2000 and the real estate bubble in September 2008. Since then, new attempts are being made to explain the behavior of financial markets. These attempts led the academic finance to evolve a long way from the efficient market theory to behavioral finance.

#### 1.2. Efficient Market Theory

Efficient market model states that price of a share equals the mathematical expectation of present value of future dividends, based on the information available at that time. Thus, an efficient market is a market in which the market prices of security are an unbiased estimate of its intrinsic value. Market efficiency does not entail that the market price is always equal to the intrinsic value of the asset. It only means that the errors in the market prices are unbiased and uncorrelated. Thus, it would be impossible to regularly find over or under-valued securities, if the deviations of market price from intrinsic value are random.

In 1970s, efficient market theory reached its height of popularity in academic field and attracted huge number of researches. As per the theoretical trends prevailing those days, two ideas that get along and flourished was the following:

- i. The stock prices or any other speculative asset prices always incorporate all the information related to its fundamental values, and
- ii. The change in stock prices takes place only because of good and sensible information.

Every known finance model at that time period tried to set a relationship between speculative asset prices and economic fundamental.

#### 1.3. Excess Volatility of 1980s

In 1980s, academic discussions about the consistency of efficient market model for the aggregate stock market started. Market consistency was tested by analyzing the time series properties of prices, dividends and earnings. Efficient market theory was unable to

explain the excess volatility in the stock prices. The unexplained variance in the forecasted price was high enough for the academicians to doubt the efficient market theory.

Although there were many efforts to defend the efficient market theory, there is still very reason to think that, while the market is not totally crazy, they contain substantial noise, so substantial that it over powers the movements in the aggregate market. Thus, by the end of 1980s, the academic researchers turned to other theories.

#### *1.4. Blossoming of Behavioural Finance*

In the 1990s, the academician shifted away their focus of discussion from econometric models for speculative assets toward developing models which includes human psychology in relation with financial markets. Thus, the field of behavioral finance developed.

Behavioral finance considered two important factors into account which were left behind in econometric models formed in 70s. These two factors, viz., information structure of a market and characteristics of market participants, influence both investment decisions and market outcomes. Behavioral finance focuses upon interpretation and action of an investor based on the information he received. Thus, behavioral finance is better equipped to explain the reason for both various market anomalies and why people buy or sell any stock.

## **2. Literature Review**

The glory of efficient market hypothesis faded with the advent of Behavioral Finance. The theory of the impact of human behavior on investment decision making was more complementary than contradictory. Behavioral Finance is “the study of how psychology affects financial decision making and financial markets” (Shefrin, 2001), or it is “simply ‘open-minded’ finance” (Thaler, 1993). The pre-text suggests that investors are not always rational decision makers; their investment decision process is often affected by their less rational behavior (Barberis & Huang, 2007).

Framing, market anomalies, and heuristics are three major premises in Behavioral Finance (Shefrin, 2001). These are perceived as patterns regarding how people behave (Ritter, 2003). Heuristics are simple rules-of-thumb or shortcuts proposed to explain how investors make their decisions particularly during adverse situations. These heuristics are generally used by investor when it is hard to make judgments, due to poor information availability, intricate investing situations and market instability. Cognitive heuristics work by a process called attribute substitution which happens without conscious awareness (Kahneman & Frederick, 2002).

The most common cognitive heuristics in behavioral finance, identified by researcher, are representativeness, anchoring, herding, and overconfidence. Apart from these heuristics, investors’ decisions are also affected by a number of illusions, which are discussed within the theoretical framework of Prospect Theory. The specific theory emerged as a model that enhanced and supplemented Behavioral Theory (Kahneman & Tversky, 1979). They suggested “people value gains and losses differently and, as such, will base their decisions on perceived gains rather than perceived losses”.

The given theory also verified that investors are dominated by fallacies, which prevent them from making correct decisions. Among the most common fallacies affecting investors’ behavior are loss aversion, mental accounting and regret aversion.

In addition to the above considerations, there is another vital consideration, i.e., people’s judgment and investing options are greatly affected by their cognitive biases. The generation and development of these cognitive biases depend on personality, culture and the socio-economic environment. These biases lead people to logical fallacy.

The major concern of behavioral finance is irrationality and failure to encounter irrationality. This irrationality is confirmed by market anomalies. One of these anomalies is calendar anomalies (weekend effect, January effect). Calendar anomalies are defined as time in a year period during which the investors’ behavior is arbitrarily differentiated. Calendar anomalies are effects that are not discussed in Efficient Market Hypothesis (Schwert G. , 2003).

Behavioral Finance also demonstrates that information and news are inefficient as they may often be deceptively communicated to investors. Typically investors are frequently incapable of exploiting information and news, since they have already been exploited by other investors (confidential information) (Shiller, 2000). In conclusion, Behavioral Finance emerged as the new dominant model for investing, which not only refuted the traditional finance but also enhanced stagnating finance theories.

The next question which we have in front of us is: do the behavior of individuals belonging to different societies are different while making their financial decisions?

#### *2.1. Group, Norms and Its Formation*

Society has been defined as an organized group of persons associated together for religious, benevolent, cultural, scientific, political, patriotic, or other purposes. Group is something of which humans is part of, from the very beginning of our life. From the moment a child is born he or she is a member of a family, which is a group. Starting from mother-child relationship, we enter into the family group. After that, we enter into the peer group, neighborhood group, social class group, religious group and so many. We always identify ourselves with one or the other group members. The word ‘group’ has many meanings. Broadly speaking we can say that a group is the aggregation of human beings. For instance, people who are sitting together in a railway platform to catch the train are a group. The pilgrims who are walking towards a town or a city to participate in a religious festival will also be called a group. On the other hand, the members of a caste, the members of a club, the members of a state and the members of a country are also called groups.

Each person’s behavior is the product of a complex combination of personal interests, attitudes, motives, beliefs and aptitudes with many formal and informal group memberships, identifications and loyalties.

Apart from this, every society have some norms somewhat different from other societies that guide our behavior. And the factors influencing norm formation are following:

- Experience with peers, parents and authorities: Swiss psychologist Piaget (Piaget, 1932) conducted important experiments on children to study the development of the sense of morality and the concept of justice in them. He observed children playing with marbles and found that learning of the social standards of right and wrong, conscience and the concept of justice progressed gradually in children, largely as a result of their experiences with their peers, parents and other authorities.
- Social interaction: This also plays an important role in the formation of norms. The social comparison theory (Festinger, 1954) posits that interpersonal interactions and agreement among group members are fundamental to the formation of group norms. A famous experiment to study the development of norms in laboratory was conducted by Sherif using autokinetic effect. In a totally dark room, a point of stationary light is presented and the subjects perceive motion in it. When they are asked to judge the distance the light travelled, they guess for themselves first when alone. But when they are in a group, they look at others for information and follow the norms set by the group.
- Observational learning: Even in a given culture itself, the norms followed by groups are learned and followed by other group members of the same culture. Hogg and Reid (Hogg & Reid, 2006) have remarked that "People in groups use other members' behaviour as information to construct a group norm". It also gives an impression of observational learning. What we see around us, we learn (Bandura, 1997).
- Communication: It is another important factor in the formation of social norms. It is not necessary always that the norms should be in written form for others to study and follow. A lot many norms are verbal in nature and travel across generations.
- Utility of the norms: One highly crucial determinant of the formation of social norms is its relative utility for the members of the group. The norm under development, in its true sense, must lead to the betterment of the social life, enhancement of social well-being, and fulfilment of needs (general and/or specific) of its members. Only those norms that are valued and reinforced by the group or society and that which leads to the fulfilment of group goals will be formed successfully and followed strictly by the people.

It might have by now been observed that the norms are learned in a social set up. Because we have grown up in a particular society, we also imbibe the norms prevailing in that particular society. The norms give an indication of cultural differences on certain normative behaviors as well. For instance, a Chinese child might be following different norms other than a Japanese child. In a given nation itself where there are cultural diversity like India, there may be certain norms followed by people of northern parts which differ from the norms followed by people of southern states. So, it is very much possible that investor in India behaves different from investors in USA, thus definitely worth studying.

### 2.2. Behavioural Finance in Asia

As, India is an emerging economy in Asia and its cultural characteristics are same as in other Asian countries; there is a need to focus our vision on Asia. Asia is popular for its diversity of culture, variety of capitalism level and participants' financial experience. So, it is definitely one of the interesting places for studying behavioral finance. Although some Asian economies are still at their early stage of development, some others have been developed for a long time. As there is difference in the level of knowledge and experience, it leads to the difference in decision making. This makes Asia a perfect platform for studying behavioral finance. Moreover, Asian people seem to be affected from cognitive biases more than Western people. Individual investors from Asia are thought to be mere gamblers (Kim & Nofsinger, 2008). Theoretically, social scientists and psychologists believe that tendencies toward behavioral biases can be nurtured by culture although the levels may vary (Yates, Lee, & Bush, 1997).

Dramatic differences in environment in two cultures are often studied in cognitive studies as an 'individualism-collectivism continuum' (Kim & Nofsinger, 2008). Asian cultures are more socially collective than Western cultures. In Asian cultures, family or group member often step up to help out other member in a drastic or adverse situation. In the individualist Western cultures, the decision maker is expected to bear the consequence of his decision, no matter how gross it would be. Collectivist society act like an insurance policy as it allow for the social diversification of risky decisions. Therefore, since the impact of a catastrophic loss is different for the Asian and Western cultures, so is its perception.

Thus, Asian cultures are of collectivist nature which makes investors' overconfident resulting in behavioral bias. Many researchers believed that behavioral inclinations can vary among cultures. Some evidences have been found to prove that Western people have less behavioral biases than Asian people (Yates, Lee, & Bush, 1997).

Not much of research has been focused on the topic of culture and decision making (Weber & Hsee, 2000). Moreover, Chen, Kim, Nofsinger and Rui provided a systematic literature about behaviors of Asian people and their effects on investment decision making (Kim & Nofsinger, 2008). In support of their theory, they found that Chinese investors suffer from an overconfidence bias and disposition effect more than U.S investors (Kim & Nofsinger, 2008).

Although behavioral finance is still a controversial topic, many financial researchers and analysts now have better understandings of human behaviors. It is also accepted that these behaviors can influence financial decision-making. Many researchers also agree that arbitrage is limited (Shleifer & Vishny, 1997), hence, these behaviors can affect prices.

### 2.3. Behavioural Finance in India

Empirical evidence shows that retail investors do not always make rational choices. The decision of Indian individual investor is influenced by five psychological axes. Those pertinent axes were named as financial heuristics, self-regulation, prudence and precautionous attitude, financial addiction, and informational asymmetry (Chandra & Kumar, 2012).

Another study demonstrates how behavioral finance provides explanations for irrational financial decisions making of investors. The study demonstrates the effect of emotions and cognitive errors on investor decision making process. The study shows that an assortment of causes that led to behavioral finance are anchoring, overconfidence, herd behavior, over and under reaction and loss aversions (Chaudhary, 2013).

#### *2.4. Investors' Preference: Utilitarian or Value-expressive*

Academician who believed in standard finance not only wanted a market which is efficient; but they also wanted mathematical models for expected returns which remains consistent with rationality. Schwert (Schwert W. G., 1983) readily believed on a requirement of a new asset-pricing theory, consistent with return anomalies and "rational maximizing behavior" on the part of all investors. Previous research raised the doubts on standard finance as they found not only anomalies but also proposed theories that imply "irrationality" (DeBondt & Thaler, 1985) (Shiller, 2000). It is suggested that the anomaly of past losers becoming future winners is because of cognitive error of overreaction (DeBondt & Thaler, 1985), and the stock market movements are because of people following irrational herd (Shiller, 2000).

The distinction between rationality and irrationality in the investment context is similar to the distinction between utilitarian and value-expressive characteristics. These two groups were used to classify product characteristics by various marketing scholars (Munson & Spivey, 1981). Value-expressive characteristics are those that permit users of a product to identify in it their values, social class, and lifestyles. An article in a famous magazine wrote, "Besides, if you don't have a tax shelter, what are you going to brag about at cocktail parties?" (Green, 1983)

The relative importance of utilitarian and value-expressive characteristics varies from product to product. Value-expressive characteristics are considered to be most prominent in jewellery, whereas less prominent in automobiles, and almost absent in detergents. In the investment context, risk is a utilitarian characteristic and those who confine their mind to it are considered rational (Statman, 1999). The word "rationality" should be extended to other characteristics, such as social responsibility, the display of wealth, the excitement of an initial public offering, or the attention on stocks.

#### *2.5. Effect of Demographic Factors on Investors' Preference*

Studies have tried to examine the relationship between demographic factors and investment decision. Male investors spend more time and money to analyze securities. Male investors depend less on brokers while trade more compared to female investors (Lewellen, Wilbur, Lease, & Schlarbaum, 1977). Moreover, the disparity in trading frequencies between male and female investors is more pronounced for married investors. Male investors earn returns less than that of female investors in spite of trading more. Young investors (less than 30 years old) tend to be more risk tolerant (Evans, 2004).

Young investors with a higher level of income invest their funds in more volatile portfolio composed of more volatile stocks (Barber, 2001). Investor's risk tolerance is also affected by the level of education. Investors with a higher level of education tolerate more risk (Bhandari & Deaves, 2006). In addition, investors with more family members tend to be risk averse (Lewellen, Wilbur, Lease, & Schlarbaum, 1977). In terms of investment choice, young investors with higher level of income, higher level of education, and less family members will choose riskier investment alternatives that offer higher expected returns. In other words, they tend to invest more of their money in stocks rather than on bank accounts and bonds. The prior researches also demonstrate that investment decision might be influenced by career concerns (Fama, 1980) (Lazear & Rosen, 1981). Research also show relevance of education to the practical investment management and found a gap between teachings and practice (Smith & Goudzwaard, 1970). Literature focuses on herding due to signal congestion between different types of managers (Scharfstein & Stein, 1990) and due to inefficient information transmission (Banerjee, 1992).

#### *2.6. Problem Statement*

Due to the positive correlation between stock market and economy, the rise of stock market will positively affect the development of the economy and vice versa. Thus, the decisions of investors on stock market play an important role in defining the market trend, which then influences the economy. To understand and give some suitable explanation for the investors' decisions, it is important to explore which behavioral factors influence the decisions of individual investors at the Indian Stock Exchange.

#### *2.7. Research Model*

On the basis of the review made in the earlier sections the following research model has been developed.

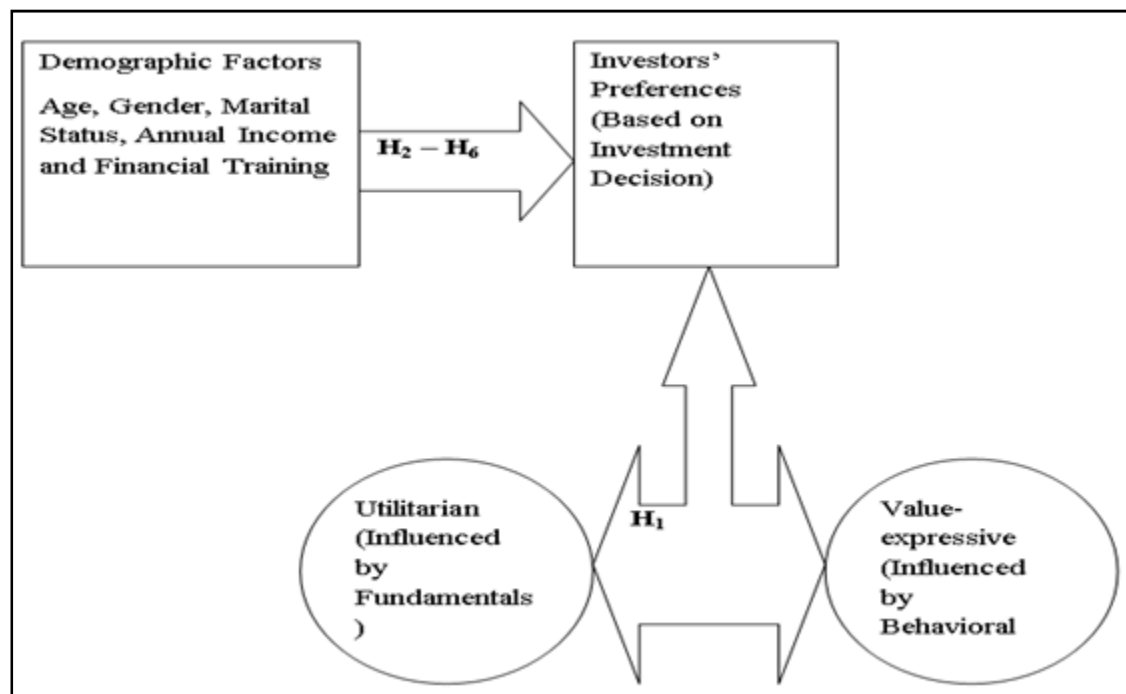


Figure 1: Research Model of demographic factors impact on investors' preference

### 2.8. Objectives of the Study

The study attempts to achieve the following objectives:

- To locate the factors influencing the decision of investment.
- To measure the extent to which an Indian investor has utilitarian or value-expressive preferences.
- To study the effect of demographic factors (like age, gender and income) on investor's preference.

### 2.9. Hypotheses

- H<sub>01</sub>: The Indian investors have greater utilitarian preference to value-expressive preference.
- H<sub>02</sub>: There is no significant relationship between age and investor's preference
- H<sub>03</sub>: There is no significant relationship between gender and investor's preference
- H<sub>04</sub>: There is no significant relationship between marital status and investor's preference
- H<sub>05</sub>: There is no significant relationship between income level and investor's preference
- H<sub>06</sub>: There is no significant relationship between financial literacy and investor's preference

### 2.10. Limitations of the Study

The study has been limited to active retail investor in India. The study only measures the investors' preference for value-expressive or utilitarian benefits, while the exploration of various dimensions of those benefits remains beyond the scope of the study. The study has been performed under time and cost constraints; thus, considers only few selected factors influencing investors' decision from the wide periphery of such factors. As the study is based on questionnaire, many respondents were not interested to reveal certain data regarding their behavioral aspects. Many of the respondents felt that the questionnaire was too heavy. Some questions might were answered with bias and without care by the respondents.

### 3. Research Methodology

The study has been based on 'Onion' model of research. Thus the strategy most suited for the research is survey method. The data has been collected using questionnaire based on multi-stage sampling. The data has been collected from metro cities in India, with a belief that it contains people from various states of the country. The renowned brokerage firms present in metro cities were contacted for the list of investors and the respondents are chosen from the list using random number table. The number of properly filled questionnaires was found to be 498 out of 750 distributed. The questionnaire contains three sections. First section contains demographic profile of respondents, second section contains questions to measure utilitarian preference of the respondents, and the final section contains questions to measure value-expressive preference of the respondents. While section one is based on nominal and ordinal scale, section two and three are based on five-point likert scale.

A pilot study was conducted initially to measure the reliability of the questionnaire using cronbach's alpha. The validity of the questionnaire was assured with the consultation of the subject experts as well as with Pearson product moment correlation. The study measures the impact level of variables using mean and standard deviation. The hypotheses were tested with the help of paired sample t-test and chi-square test.

**4. Data Analysis and Findings**

*4.1. Profile of Investors*

750 questionnaires administered to individual investors at Indian Stock Exchange (BSE and NSE) by post and mails. Out of those, 498 respondents were replied. Thus the response rate is 66.4%, a moderate high rate for a postal questionnaire survey. The 498-respondent sample with the characteristics of gender, age, marital status, annual income and equity training received are described in **Table 1**.

Variables		Number of Investors
Gender	Male	387
	Female	111
	Total	498
Age	Below 30	185
	30-40	153
	40-50	88
	50 above	72
	Total	498
Marital Status	Single	193
	Married	305
	Total	498
Income Level	Below 3 lacs	111
	3 lacs-8 lacs	242
	Above 8 lacs	145
	Total	498
Equity Training	None	300
	Basic Level	103
	Medium Level	70
	Advance Level	25
	Total	498

Table 1: Profile of Investors

Using the table above, the following graphical representation has been developed.

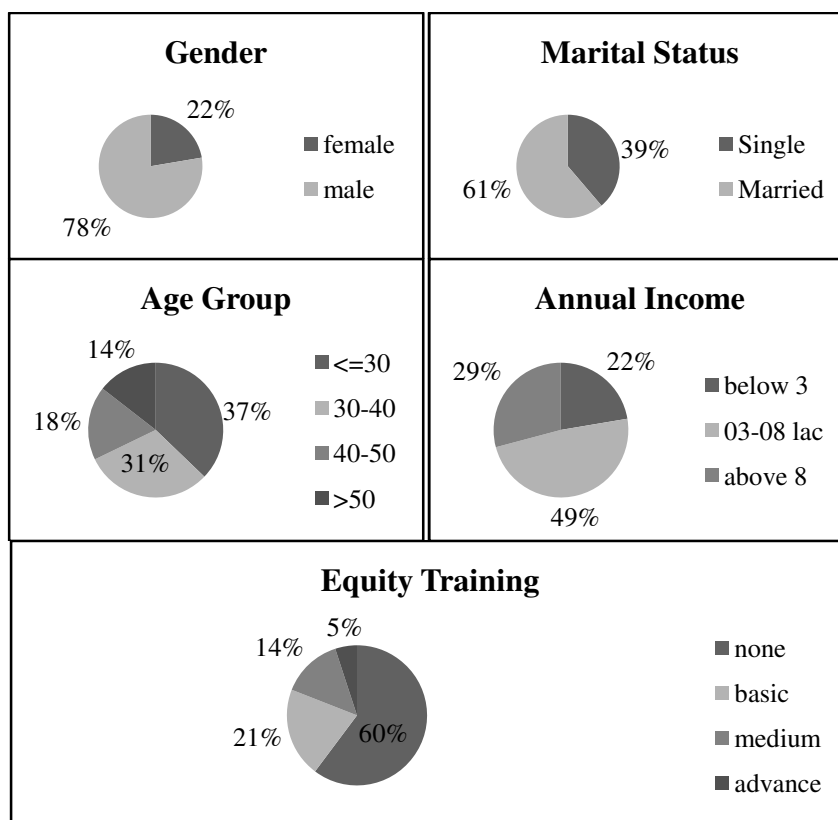


Figure 2: Sample distributions of Gender, Marital Status, Age, Annual Income and Equity Training

The Figure 2 shows that number of male investors present in the market is more than three times the number of female investor out of which most are married and below the age of forty. 68 % of respondents were found to be of age less than forty years. This sample reflects that Indian market is mostly filled with young investors below 40 years. Most of investors from the sample belonged to middle income group. The most interesting fact discovered was, that 60 % of the investors present had not received any training on equity.

#### 4.2. Validity Test

To check the validity of the measure, Pearson Product Moment Correlation has been used. Both the section of the questionnaire was checked separately for its validity. The results of Pearson Product Moment Correlation are shown in the table below.

Preference	Variables (Questions)	Pearson Correlation Item-Total Score	Sig. (2-tailed)
Value-expressive	Q1	.315**	.001
	Q2	.693**	.000
	Q3	.380**	.000
	Q4	.222*	.026
	Q5	.422**	.000
	Q6	.679**	.000
	Q7	.856**	.000
	Q8	.413**	.000
	Q9	.330**	.001
	Q10	.596**	.000
	Q11	.366**	.000
	Q12	.563**	.000
	Q13	.651**	.000
	Q14	.375**	.000
	Q15	.401**	.000
Utilitarian	Q16	.866**	.000
	Q17	.773**	.000
	Q18	.411**	.000
	Q19	.455**	.000
	Q20	.806**	.000
	Q21	.333**	.000
	Q22	.776**	.000
	Q23	.778**	.000
	Q24	.305**	.000
	Q25	.717**	.000
	Q26	.799**	.000
	Q27	.672**	.000
	Q28	.505**	.000
	Q29	.700**	.000
	Q30	.762**	.000
**. Correlation is significant at the 0.01 level (2-tailed).			
*. Correlation is significant at the 0.05 level (2-tailed).			

Table 2: Pearson Correlation for items to total score for various investors' preferences

Table 2 represents the Pearson Correlation between items/question and the total score i.e. V-score and U-Score. The values of correlations found for each of the items were found to be significant authenticating the validity of the questionnaire used.

#### 4.3. Reliability Test

To check the reliability of the measure, Cronbach's Alpha is used to test the reliability of items included in the two specified investors' preference. This test is done to make sure that the measure is reliable for further uses. The results of Cronbach's alpha test are shown in the Table 3.

Preference	Variables	Cronbach's	Corrected Item-Total	Cronbach's Alpha if Item	F (sig.)
Value-expressive	Q1	0.788	0.230	0.786	456.452 (.000)
	Q2		0.554	0.762	
	Q3		0.298	0.783	
	Q4		0.177	0.791	
	Q5		0.353	0.779	
	Q6		0.587	0.757	
	Q7		0.779	0.736	
	Q8		0.329	0.781	
	Q9		0.205	0.791	
	Q10		0.477	0.768	
	Q11		0.278	0.785	
	Q12		0.432	0.773	
	Q13		0.556	0.766	
	Q14		0.237	0.786	
	Q15		0.321	0.781	
Utilitarian	Q16	0.888	0.816	0.867	128.016 (.000)
	Q17		0.689	0.875	
	Q18		0.328	0.889	
	Q19		0.362	0.888	
	Q20		0.619	0.878	
	Q21		-0.039	0.899	
	Q22		0.726	0.873	
	Q23		0.715	0.873	
	Q24		0.230	0.893	
	Q25		0.638	0.877	
	Q26		0.737	0.873	
	Q27		0.598	0.879	
	Q28		0.393	0.887	
	Q29		0.623	0.877	
	Q30		0.700	0.874	

Table 3: Cronbach's Alpha test for items of various investors' preferences

Table 3 presents that Cronbach's Alpha indices of both preferences are greater than 0.6 and the corrected item-total correlation of most of the items are more than 0.30. Besides, Cronbach's alpha of almost every item if it item is deleted is less than the factor's Cronbach's Alpha, as well as the significant of F test for each factor, a kind of test to make sure the suitability of using Cronbach's Alpha technique for the data, is less than 0.05. These indices show that items included in the Value-expressive and Utilitarian Preferences are reliable enough to follow further analysis.



#### 4.4. Impact Level of Various Factors on the Individual Investors' Preference

The impact levels of behavioral and fundamental variables on the investment decisions are identified by calculating the values of sample mean of each variable.

Preference	Variables	Mean	Standard
Value- expressive	Q1	1.25502	0.596118
	Q2	3.471888	1.55781
	Q3	3.975904	0.976289
	Q4	4.176707	0.822777
	Q5	4.018072	0.810938
	Q6	3.608434	1.187328
	Q7	3.714859	1.23294
	Q8	3.345382	0.787981
	Q9	3.636546	0.992137
	Q10	3.7249	1.189585
	Q11	3.791165	0.947602
	Q12	3.608434	1.019572
	Q13	2.407631	0.800215
	Q14	2.678715	0.787981
	Q15	1.837349	0.781869
Utilitarian	Q16	2.728916	1.393
	Q17	3.164659	1.007515
	Q18	3.60241	0.933694
	Q19	2.791165	1.03294
	Q20	2.540161	1.145103
	Q21	4.070281	0.772438
	Q22	2.706827	1.170734
	Q23	2.668675	1.104528
	Q24	2.421687	1.004463
	Q25	2.630522	1.016975
	Q26	2.779116	1.089277
	Q27	3.078313	1.018882
	Q28	2.648594	1.085392
	Q29	2.801205	1.128842
	Q30	2.586345	1.06034

Table 4: Mean and standard deviation of the score of two groups of factors influencing the Indian investors' behavior

The above table provides the mean and standard deviations of the score of two groups of the factors influencing the Indian investors' behavior. All the calculated means of the two groups are greater than 40 out of maximum 75. In other words all the thirty factors included in the questionnaire are somehow affecting the investing behavior.

Because 5-point scales are used to measure the impact levels of these variables, the mean values of these variables can decide their impact levels on the investment decision making as the following rules

- Mean values are less than 1 shows that the variables have very low impacts
- Mean values are from 1 to 2 shows that the variables have low impacts
- Mean values are from 2 to 3 shows that the variables have moderate impacts
- Mean values are from 3 to 4 shows that the variables have high impacts
- Mean values are more than 4 shows that the variables have very high impacts.

## 4.4.1. Impact of Behavioral Variables on Investment decision

Preference	Variables (Questions)	Mean	Standard Deviation
Value-expressive	Company's CSR Activities	3.471888	1.55781
	Company's Management	3.975904	0.976289
	Company's Brands	4.176707	0.822777
	Respondents' Feeling towards product or service of the firm	4.018072	0.810938
	Company's Majority Stakeholders	3.608434	1.187328
	Government as Stakeholder	3.714859	1.23294
	Renowned MFs invested	3.345382	0.787981
	Company in News	3.636546	0.992137
	'Get Rich Quickly' stock	3.7249	1.189585
	Gut Feeling	3.791165	0.947602
	Broker's Recommendation	3.608434	1.019572

Table 5: Impact of Behavioral Variables on Investment decision

Table 5 represents that out of 15 variables considered at the beginning of the study, 11 variables have high to very high impact on investment decision of an individual. It is evident that investor behavior is not always rational, they are guided by many behavioral factors thus have value-expressive tendencies for their investment.

## 4.4.2. Impact of Fundamental Variables on Investment decision

Preference	Variables	Mean	Standard Deviation
Utilitarian	Economic Indicators	3.16	1.008
	Company's Past Performance	3.60	0.934
	Company's Sales Growth	4.07	0.772
	Company's Dividend Paying Record	3.08	1.019

Table 6: Impact of Fundamental Variables on Investment decision

**Table 6** indicates those fundamental variables (out of the 15 such variables considered in this study) which have high or very high impact on investment decision of an individual. It is evident from the sample statistics in the **Table 4**, **Table 5** and **Table 6** that investment decision are mostly affected by behavioral variables and very few fundamental variables are used while making investment decision.

## 4.5. Hypothesis Testing

Null Hypothesis	Test Performed	Value-obtained	Degree of Freedom	Significance	Test Result
The Indian investors have greater utilitarian preference to value-expressive preference.	Paired Sample t-test	8.831	497	0.000	Null Hypothesis Rejected
There is a no significant relationship between age and investor's preference	Pearson Chi-square test	22.213	3	0.000	Null Hypothesis Rejected
There is a no significant relationship between gender and investor's preference	Pearson Chi-square test	6.149	1	0.019	Null Hypothesis Rejected
There is a no significant relationship between marital status and investor's preference	Pearson Chi-square test	14.713	1	0.000	Null Hypothesis Rejected
There is a no significant relationship between annual income and investor's preference	Pearson Chi-square test	1.399	2	0.497	Null Hypothesis Accepted
There is a no significant relationship between equity training and investor's preference	Pearson Chi-square test	18.55	3	0.000	Null Hypothesis Rejected

Table 7: Summary of hypotheses testing

## 5. Conclusion

The pattern of respondents indicates that young investors, i.e., age below 40 years, form the major section of Indian stock market. Male investors exceed the number of female investors. Most of respondents did not have equity training which indicates the unawareness of Indian individual investor towards the fundamentals of investing. Moreover, they lack self-awareness which is fundamental to avoid behavioral biases affecting their investment decision. Most of the respondents in the study scored high on value-expressive behavior than on utilitarian behavior. There were fifteen variables chosen for each of the part of questionnaire, i.e., for both value-expressive and utilitarian. Results obtained showed that people considers 11 (out of the 15) behavioral variables and 4 (out of 15) fundamental factors to be important. So, on the basis of respondents reply fifteen out of thirty variables chosen for the study were considered important. And out of those fifteen important variables identified 11 variables are behavioral while only four are utilitarian. Thus, people rely more on behavioral variables to make their investment decision than the fundamental factors. Moreover, it can also be concluded that investors are more than 70% (11/15) value-expressive (irrational) and rest utilitarian (rational). Hence investors require a mixture of utilitarian (financial) and value-expressive (psychic) benefits in their investment. It can be further concluded that if an investor's requirement of financial benefits from investment will increase his requirement for psychic benefits will decrease. So, there is a trade-off between financial benefits and psychic benefits from investment.

The effect of demographic factors was also evident from the results. As per the responses collected via questionnaire, the respondents' age, gender, marital status and training in equity have significant relationship with their investment preference. But no such relationship exists between annual income of the investor and their investment preference.

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