International Journal of Education and Science Research Review
Volume-11, Issue-5 Sep-oct-2024 E-ISSN 2348-6457
(Peer-Reviewed, Open Access, Fully Refereed International Journal) P-ISSN 2349-1817
www.ijesrr.org Impact Factor - 7.02 Email- editor@ijesrr.org

DETERMINE THE DEGREE OF CORRELATION BETWEEN VARIOUS DEMOGRAPHIC VARIABLES AND FACTORS THAT INFLUENCE INVESTMENT DECISION-MAKING

Kanaklata Singh, Research Scholar, Dept of Management,

Maharaja Agrasen Himalayan Garhwal University

Dr Ajit singh, Associate Professor, Dept of Management,

Maharaja Agrasen Himalayan Garhwal University

ABSTRACT

The current thesis attempted to investigate how seven behavioral biases—loss aversion, regret aversion, overconfidence, herd behavior, anchoring, cognitive dissonance, and representativeness bias—affect investors' decision-making process when making investments. Using a sample of 380 investors from Delhi/NCR, India, the impact of these seven behavioral biases on the decision-making process for investments was investigated. The results showed that investors who took part in the survey, which was designed to collect data on several behavioral biases, were not very familiar with the idea of behavioral finance. Furthermore, the research's conclusions imply that the majority of these investors fall prey to several biases taken into account. The main advice given to investors is to always work to increase their understanding of behavioral finance by learning more about it. Understanding different behavioral biases would undoubtedly aid them in determining the extent and mode of sentimental influence on their investment decisions in unpredictable circumstances. Simultaneously, it is highly recommended that they maintain a record of the behavioral biases to which they are likely to be vulnerable after gaining sufficient knowledge about them. These documents ought to be reviewed from time to time in order to refresh their memories and help them make better stock market investments. Understanding behavioral biases and how they affect the process of making investment decisions would undoubtedly boost rationality and contribute to greater market efficacy.

KEYWORD: Behavioral Finance, Investors, Vulnerable, Market Efficacy

1. INTRODUCTION

One of the world's fastest-growing capital markets is the Indian one. It has recently undergone remarkable maturation in line with the shifting global financial markets. With its founding in 1875, the Indian stock market is among the oldest. The Bombay Stock Exchange (BSE), formerly known as the Native Share and Stock Broker Association, was India's first share trading organization. India's first stock market index that can be tracked internationally is the SENSEX, or BSE India benchmark index. The 30 most volatile equities from 12 different sectors make up the SENSEX. Investors used to congregate on the trading floor to start a transaction in the early days of trading. But as time went on, a number of frauds and a lack of cutting-edge technology made it imperative to launch a new and improved exchange, which is how the National Stock Exchange (NSE) was founded. With more than 50,000 trading stations, the NSE is currently regarded as one of the most sophisticated exchanges for trading specific stocks and exchange futures. The National Stock Exchange launched the S&P CNX Nifty in 1996, which included 50 erratic stocks from 25 different industries. Starting in 2000, it also allowed internet stock trading. The majority of transactions are now completed electronically due to the development of information technology, which has led to paperless stock markets.

The primary and secondary markets are the two segments that make up the capital market. New securities are issued in the primary market (commonly known as initial public offerings, or IPOs), and all subsequent trading of these securities occurs in the secondary market. The primary market serves as a platform that boosts financial and industrial operations by providing limited cash to the government and industries. It is the principal medium that facilitates the direct mobilization of family savings for investment objectives. It expands the secondary market's base and raises volatility by bringing new securities to the market.

Conversely, the secondary market reflects the state of the economy overall and offers liquidity for stock investments. Businesses typically raise two kinds of capital from the capital market: debt and equity. While debt represents the company's obligation to third parties, equity capital is regarded as a component of net worth. Additionally, firms and investors favor funds borrowed through equity above those obtained through debt. This is because it enables businesses to approach banks for long-term finance if they are successful in raising a sizable amount of equity capital through an initial public offering (IPO).

In addition to experiencing precarious adoration for many years, the Indian stock market has encountered exceptional jubilation from the early 1990s. There are currently 19 stock exchanges in India, with the National Stock Exchange (NSE) and Bombay Stock Exchange (BSE) accounting for over 99% of the market's total turnover. Together, these two markets list almost 9600 businesses. Since investors will only purchase stocks if they perceive that they have the potential for excessive profits, the success of the equity market depends solely

on their trust. There are two categories of investors in the stock market: institutional investors and retail investors, or individual investors. Large investors who enlist the aid of portfolio managers are known as institutional investors. Portfolio managers do not inject the most desirable hazardous capital by emerging firms to conduct new business operations; instead, they merely reorganize the financial assets in their portfolio based on their individual assessment of a variety of stocks. Furthermore, foreign institutional investors (FIIs) often invest their money in any nation solely to buy stock in highly successful businesses; they do not provide risk capital to organizations; instead, risky capital is provided by retail investors. They provide risk money through mutual fund investments or equity share investments, and they have been responsible for market swings for many years.

2. REVIEW OF LITERATURE

Numerous research have been conducted to examine how the 2008 speculative bubble affected investor behavior. The US Sub-prime crisis was the catalyst for this financial catastrophe, which spread to other nations and reduced investors' profits from diversification. The effects of the 2008 financial crisis on the co-movements of the Indian stock market with thirteen other foreign stock markets between May 15, 2006, and August 5, 2010 were studied by Gulser et al. (2011). He verified that there is a correlation between the Indian stock market and the markets in the United Kingdom, Germany, the United States, Japan, Australia, Singapore, and Hong Kong, indicating that there aren't many advantages to diversifying a portfolio globally. Conversely, it was discovered that the markets in South Korea and Malaysia had less correlation with the Indian market, demonstrating that Indian investors were getting the most out of diversity. Sen (2011) also examines the Indian stock market's short- and long-term relationships with the stock markets of Australia, Hong Kong, Japan, Indonesia, Korea, Taiwan, and Singapore from July 1997 to June 2009. The author employed the Granger Causality test to determine the direction of the short-term link, the Johansen Cointegration test to identify the long-term relationship between sample indexes, the unit root test to verify stationarity, and the cross-correlation approach to quantify the co-movement of variables. He supported the findings of Gulser et al. (2011), which showed that the SENSEX has a strong correlation with other stock indices, with the exception of the Japanese stock market, which has a low correlation coefficient. Additionally, he discovered that the index returns and SENSEX returns had a unidirectional short- and long-term link.

Paskelian et al. (2011) used the duration dependence test, variance ratio test, regime switching regression test, and unit-root test to examine if there was a speculative bubble in the Chinese real estate market between 2004

and 2010. Using conventional econometrics methods, they discovered conflicting evidence of bubble activity. The unit root test revealed no evidence of speculative bubbles, but the duration dependence test verified their existence in the Chinese real estate market. Furthermore, the presence of a speculative bubble in the Chinese real estate market is more strongly indicated by the highly significant coefficients of the regime switching model. However, Ray (2009) discovered evidence of a difference between the conduct of student investors prior to and following the 2008 market meltdown. Conversely, he discovered that while certain market players' actions were somewhat irrational, the majority of student investors believed that the market was overpriced before to the crisis. He employed the paired-sampled T-test to analyze the data of 120 management students from various Indian business schools who were actively trading on the Indian stock market both during and after the 2008 financial crisis. Additionally, he discovered that student investors exhibited herd mentality since they all relied on comparable sources of information before making any investments and failed to consider market conditions prior to or during the crash. Ali et al. (2009) conducted research on the Kuala Lumpur Stock Exchange from January 1987 to December 2006 in order to determine the relationship between stock overreaction and financial bubbles. The portfolios were separated into winner and loser portfolios, and one sample t-test and independent sample t-test were used to identify any differences in the abnormal returns.

3. OBJECTIVES OF THE STUDY

1. Determine the degree of correlation between various demographic variables and factors that influence investment decision-making.

4. RESEARCH METHODOLOGY

The current study's methodological approach entails a thorough examination of demographic characteristics and patterns of investing decisions based on a range of financial and behavioral aspects. The data is then divided into various groups according to particular attributes, and the investor group that is most impacted by behavioral biases is examined. The current study focuses on primary data gathered through questionnaires, which are thought to be the most appropriate and efficient method for learning about the beliefs, actions, and perspectives of a large number of respondents regarding financial investment decisions. Additionally, the primary goal of the current study is to gather information on investor behavior in order to analyze which investor groups are more or less impacted by behavioral biases and to investigate how demographic factors may influence an investor's decision to engage in a particular action. In order to gather the investors' behavioral data without actually offending them, the questionnaire was carefully crafted. There are three sections to the

questionnaire. Nineteen questions make up Section 1, which asks about the investors' general information, including their gender, age, educational background, number of years of investment experience, preferred investment term, rationale for investing in the stock market, and the amount of loss their portfolio has incurred thus far. Respondents were given a variety of investment options in section 2 and asked to rank them in order of preference. Additionally, they were asked to check the risk and return levels they believed that specific investment channel possessed. Five points were used to develop the risk and return level questions. From extremely high (represented by 1) to very low (represented by 5), the "Likert Scale" shows that an investment avenue is very hazardous or has a high return, while very low implies a low level of risk or return. In order to determine whether or not behavioral bias influences their investment decisions, respondents were given behaviorally related questions in section 3. Every question pertaining to prejudice is also constructed using a five-point "Likert Scale," where answers range from strongly disagree to strongly agree. Strongly disagreeing respondents indicate that the prejudice has no bearing on their conclusions, whereas strongly agreeing respondents indicate that the behavioral bias is present during the decision-making process. Additionally, the values of five, four, three, two, and one are used to quantify these five points: strongly agree, agree, neutral, disagree, and strongly disagree.

5. DATA INTERPRETATION AND RESULTS

Marital Status of the Investors

TABLE 5.1

RESPONDENT'S MARITAL STATUS

Marital Status	Percentage(%)
Single	43%
Married	57%

However, Table reveals that 57% of respondents are married and 43% are single. These findings go counter to the notion that single investors make larger investments than married individuals. The findings indicate that married investors are making larger investments in the stock market in the hopes of generating extra income, while unmarried investors are making smaller investments in the stock market. This could be due to family

obligations or a desire to pursue alternative investment opportunities where they can obtain fixed returns with comparatively lower risk.

Occupation of the Investors

Numerous stock broking firms and investment organizations acknowledge occupational classification as a crucial foundation for determining investors' investment strategies. Compared to salaried investors, investors who make their living from their own business or profession are probably going to take on more risk. Investors' ability to take on risk is also influenced by their occupational rank; those in senior positions are more inclined to take on risk than those in lower occupational levels.

TABLE 5.2:

RESPONDENT'S OCCUPATION

Occupation	Percentage(%)
Salaried	74%
Professional	21%
Businessman	3%
Retired	1%
Others	1%

The occupations of the respondents are shown in Table as being divided into five groups: salaried, professional, businessman, retired, and others. The majority of respondents (74%) are salaried employees, followed by professionals (21%), according to this number. The minority who make a small contribution are businessmen (3%), retirees (1%), and others (1%).

Number of Dependents of the Investors

The size of the investor's family has a significant impact on both the choice of investment channel and the appropriate investment quantity. In other words, if an investor has additional dependents in his family, his investment behavior is probably going to change significantly. Additionally, the amount of dependents in a household has an inverse relationship with investment behavior; the more dependents there are, the less money available for investments, and vice versa.

TABLE 5.3:

NUMBER OF DEPENDENTS IN FAMILY

Numbers of Dependents	Percentage(%)
Two	12%
Three	52%
Four	31%
Five or more	5%

The similar inference is shown in Table. The majority of investors (52%) had three family members, followed by 31% with four, 12% with two, and 5% with five or more.

Type of Investors

Hereditary investors and new investors are the two categories of investors in the Indian stock market. While some investors are inspired by the liberalization and transparency of stock market investing, inherited investors develop a preference for equities investing as a personality feature. The responses of respondents regarding their category are shown in Table. It is discovered that while 24% of respondents are inherited investors, 76% of respondents are new investors with a greater awareness of stock risk and returns. This suggests that the majority of respondents are new investors who are drawn to the range of financial assets produced by liberalization policies and the clarity of the Indian capital market.

TABLE 5.4

TYPE OF INVESTORS

Type of Investors	Percentage(%)
Hereditary Investors	24%
New Investors	76%

Losses suffered by less experienced and experienced investors

The respondents were asked to reveal the losses they have suffered thus far on their investments. The losses incurred by both novice and seasoned investors on their portfolios are displayed in Table. The data shows that 150 investors (42.8%) have lost less than 10% of their investment, with 65 having less experience and 85 having more. 100 investors (28.5%), 50 of whom were less experienced and 50 of whom were more experienced, reported that they had not yet suffered any losses. There were 40 (11.5%) investors who suffered losses of between 10% and 30%, with 20 having less experience and 20 having more. Furthermore, just 15 investors (4.3%) have lost more than 50% of their money; 10 of these investors are seasoned, and 5 are less experienced. With the exception of choices that fall below 10% and those that fall above 50%, the above table also demonstrates that investors falling into various portfolio loss alternatives are nearly comparable for both investor categories.

Table 5.5 : Losses suffered by Less experienced and experienced investors

		Loss on portfolio					Total
		no loss	<10%	10%-30%	30%-50%	above 50%	
less experienced investors	Count	50	65	20	20	5	160
	% within investexp	31.3%	40.6%	12.5%	12.5%	3.1%	100.0%
	% of Total	14.5%	18.2%	6.6%	5.3%	1.6%	46.1%
experienced investors	Count	50	85	20	25	10	190
	% within investexp	26.4%	44.7%	10.5%	13.1%	5.3%	100.0%
	% of Total	13.9%	23.4%	6.3%	6.8%	3.4%	53.9%
Total	Count	100	150	40	45	15	380
	% within investexp	28.5%	42.8%	11.5%	12.9%	4.3%	100.0%

It is also necessary to determine whether there is a connection between the experience of investors and the losses they have incurred on their portfolios.

Table 5.6: Chi-Square Test (Investor's experience & loss on portfolio)

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.605[a]	4	.462
Likelihood Ratio	3.651	4	.455

Linear-by-Linear Association	1.479	1	.224
N of Valid Cases	350		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.75.			

Pearson Chi-Square, Likelihood Ratio, and Linear-by-Linear Association all have p-values of 0.462, 0.455, and 0.224, respectively. This showed that, at a 95% confidence interval, the null hypothesis could not be ruled out. As a result, it was impossible to establish with certainty that investors' experiences and losses were related. Even while it is clear that respondents lost money on their portfolios, it is more intriguing to examine whether or not they are susceptible to behavioral biases when choosing investments.

6. CONCLUSION

• Investor type was used as the discriminant function D, which displays independent variables in the equation, in discriminant analysis. According to discriminant analysis, the factors that contributed most to group discrimination were loss aversion, regret aversion, herd behavior, overconfidence bias, anchoring bias, and cognitive dissonance bias; in contrast, representativeness bias was the negligible factor that did not contribute to group discrimination. The degree to which independent variables contribute to the discrimination function is indicated by their coefficients.

• According to the canonical discriminant function coefficients, cognitive dissonance and loss aversion were the biases with the greatest coefficient values, meaning that one investor type was displaying these biases significantly more than the other.

• It was observed that while the behavioral biases collectively affected both less experienced and experienced investors, the degree to which each bias affected the groups varied, and it was statistically possible to separate the behavior of the less experienced investors from that of the experienced investors.

• The discriminant function achieved statistical reliability by successfully capturing 92.9% of the behavioral differences between novice and seasoned investors. This suggested that it would be possible to make a strong case that seasoned investors exhibit different behavioral patterns than novice ones.

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