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Psychological and Economic Determinants of Investment Decision-Making in The Indian Stock Market: The Role of Risk Perception

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Abstract

There are a lot of economic and psychological factors that impact the choices that investors in the Indian stock market make, with risk perception being one of the most important factors. According to the findings of this study, the emotional affects, cognitive biases, risk tolerance, and cognitive biases of investors interact with market conditions, financial literacy, and interest rates to influence the behavior of investors. The research makes use of the behavioural finance theory in order to demonstrate how certain psychological factors, such as aversion to loss and herd mentality, may cause individuals to make choices that are not rational. In the essay, the subject is explored in further depth, with an investigation of the ways in which investors' perceptions of risk impact their decision-making. Incorporating economic information with survey data from Indian investors, the study investigates the intricate link that exists between investor psychology and the circumstances of the economy. According to the findings, the decisions that are made about investments are significantly influenced by both psychological dispositions and economic circumstances. Risk perception, on the other hand, is an essential moderating factor in this connection. This research aims to improve investment performance by addressing behavioural biases and risk-related attitudes. The findings of this study have significant consequences for the formulation of public policy, the provision of advisory services, and the education of financial professionals.

Keywords: Behavioural finance, Indian stock market, economic considerations, psychological influences, risk perception, and investment decision-making

1. Introduction

There are a great number of psychological and economic factors that have an influence on the complicated process of investing in the stock market. In view of the recent spectacular ups and downs that the Indian stock market has undergone, it has become more important to have a solid understanding of the variables that drive the behavior of investors. The difficulty of comparing potential rewards against perceived risks, in addition to the volatility of the market and an overwhelming quantity of information, is a challenge that is often encountered by investors. The research conducted in the field of behavioural finance has shown that investors often make judgments that are either emotionally driven or irrational. This is in contrast to the predictions made by classical economic theory, which said that investors would

make rational decisions based on all available information in order to maximize profits. Therefore, in order to give an explanation for investment decisions, it is vital to have a solid understanding of the link between human qualities and economic circumstances. This is particularly true in emerging countries such as India's. The manner in which investors comprehend and cope with the unpredictability of the financial markets is referred to as risk perception, and it is an essential component in the process of making choices about investments. One example of an objective economic element that might have an effect on how risk is perceived is the interest rate. Other examples include market volatility and financial literacy.

Psychological Factors and decision-making process in investment

Furthermore, subjective psychological factors including risk tolerance, cognitive biases, and emotional reactions are other factors that play a part in the decision-making process. Those who are concerned about the possibility of losing money could put too much caution into their investments, or they might even completely avoid investing in stocks. The opposite side of the coin is that investors who are overconfident could not effectively analyze risks, which would result in investment results that are below average. In addition, qualities like as loss aversion, which is the tendency to strongly prefer avoiding losses over gaining equal benefits, and herd behavior, which is when individuals follow the decisions of others, play significant roles in influencing how risk is perceived and how it is acted upon.

There is a broad range of investor profiles in India's stock market, ranging from individual traders to huge institutional investors, which makes the process of making investment decisions in the stock market more challenging. Retail investors are more likely to have emotional responses during times of market volatility. This is due to the fact that they are more prone to psychological biases and lack formal financial understanding. On the other hand, institutional investors may include psychological elements into their decision-making process, despite the fact that they may utilize technical analysis and economic data more often in their decision-making process. In light of the intricate link that exists between psychological and economic factors, it is of the utmost importance to have a comprehensive understanding of the role that each plays in influencing investment decisions within the context of India.

The role that risk perception plays in the Indian stock market, the objective of this research is to analyze the other economic and psychological aspects that play a role in determining investment choices. In order to address a gap in our understanding of the factors that influence investment choices, the objective of this study is to investigate the dynamic relationship that exists between market conditions, financial literacy, and individual traits such as risk tolerance, overconfidence, and cognitive biases. A deeper knowledge of these dynamics may be beneficial to financial advisors, politicians, and investors alike. This understanding may help reduce the influence of behavioural biases and maximize investment returns, all of which are important considerations.

2. OBJECTIVES

1. To investigate the psychological aspects that impact the choice to participate in the Indian stock market,
2. To examine how economic factors, including interest rates, market circumstances, and financial literacy, influence investment choices

3. RESEARCH METHODOLOGY

The primary purpose of this research is to evaluate the effect that risk perception has on the economic and psychological aspects that affect choices about stock market investments in India. An technique that is quantitative in nature, including survey-based data collection and statistical analysis, will be used as the methodology in order to investigate the hypotheses that are presented in the study. The methodology of the research, including its design, sampling, data collection, and analytical techniques (such as hypothesis testing and reliability evaluation using Cronbach's alpha), may be found in this section. You may find more information about the intricacies of the methodology here.

Research Design

This descriptive and explanatory research aims to uncover the variables that impact investment choices as well as the manner in which psychological and economic factors interact with one another. The study will also provide an explanation of the characteristics of these components. In the quantitative investigation that is being conducted, statistical testing is used in order to ascertain the strength and significance of these correlations.

4. HYPOTHESIS

H1: Economic considerations impact stock market investing decisions by individual investors.

H2: Socio-cultural factors affect stock market investing decisions.

H3: Personal stock market investing decisions are heavily influenced by psychology.

Data collection

The structured questionnaire that was sent using a non-probability sampling technique was developed with the intention of eliciting responses from individual investors. In the first of the two sections of the questionnaire that together constitute the entire, the responder is asked to provide information about their age, gender, and occupation. In the following section, we will discuss a variety of research questions that have been drawn from earlier studies and that concentrate on the factors that individuals take into consideration while making investments in the stock market. Investors are asked to express their thoughts using a Likert scale that ranges from 1 (strongly disagree) to 5 (strongly agree), where 1 means they strongly disagree. A total of fifty individuals took part in the pilot study and were given questionnaires prior to the final poll. It is possible that the findings from the pilot study will assist in clarifying questions and making adjustments based on the comments made by respondents. The Cronbach alpha coefficients that were acquired from the pilot research provided support for the level of scale reliability that was required for large-scale assessment of the select scale. These values ranged from 0.728 to 0.926 for the study variables. In the most recent survey, Google forms were disseminated throughout a variety of social media channels in order to collect responses. A total of 260 questionnaires were filled out by the investors; however, only 253 were selected for further investigation due to the presence of missing or incomplete data.

Data analysis methods

In this investigation, we used SPSS and AMOS 24 version, two state-of-the-art statistical packages. In order to determine what variables affect people's stock market investing decisions and to check whether the instrument was construct valid when it was originally being developed, the researchers used

exploratory factor analysis (EFA) using Cronbach's alpha values. To go a step further, we used structural equation modeling (SEM), which involves procedures like confirmatory factor analysis (CFA) to ensure the final measurement instrument was valid and reliable, and model development using structural equations to assess the complete set of relationships between the latent constructs indicated by multiple measures. Mean, frequency, percentage, and other descriptive statistics were also used in the investigation.

5. RESULTS AND DISCUSSIONS

Demographics responses

The demographic information of the people who participated in the study is shown in Table 1. According to the report, males account for 64.4% of investors, while women only make up 35.6% of investors. A majority of the respondents, namely seventy percent, are those who are between the ages of 25 and 35. The percentage of paid investors is the highest among all occupations, coming in at 62%. This is in comparison to other professions.

Table1: Details on the respondents' demographics (N=253)

Measures	Items	Frequency	Percentage
Gender	Male	163	64.4
	Female	90	35.6
Age	Below24	33	13
	25-35	177	70
	35-45	43	17
Marital Status	Married	149	58.9
	Unmarried	104	41.4
Occupation	Student	11	4.4
	Business	22	8.6
	Salaried	157	62.1
	Others	63	24.9

Exploratory Factor Analysis

The study used the main component extraction method with Varimax rotation in order to carry out EFA. This was done in order to guarantee reliability and establish validity. By doing so, they were able to determine whether or not the observed variables were loaded together, and they discovered that there were no instances of cross loadings. As a result of the fact that the varimax rotation is an orthogonal rotation, it makes sure that each component is treated individually and that there is no strong correlation between them. Through the use of the Rotated Component Matrix, it was possible to identify four variables that had Eigenvalues that were larger than one and that explained 74.6% of the variation. Given that the value of the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is 0.887 and the Bartlett's test of sphericity is significant at α=0.000, it is possible for us to draw the conclusion that the sample that we have selected is sufficient for further investigation. For the sake of our inquiry, we only retained items that had factor loadings of 0.5 or higher; we got rid of anything that did not match this level. Each and every item was chosen (with communalities greater than 0.7), with the exception of E4, which did not load satisfactorily on its assigned component. We made use of Cronbach's alpha coefficient in order to determine the degree of reliability that each component had. The reliability criterion is satisfied by factors that have alpha values that are more than 0.7. As can be seen in table 2, all of the factors that were chosen for this investigation have alpha values that fall between the range of 0.848 to 0.926, which means that they fulfill the reliability requirements.

Table 2: Cronbach's alpha, factor loadings, communalities

Cronbach 'alpha	Parameters	Component/Factors				
		1	2	3	4	Communalities
0.875	P1	.784				.767
	P2	.807				.722
	P3	.782				.772
	P4	.759				.706
0.905	SC1		.875			.835
	SC2		.756			.769
	SC3		.843			.720
	SC4		.832			.798
0.848	EF1			.793		.813
	EF2			.746		.792
	EF3			.785		.817
	EF5			.819		.818

	EF6			.782		.749
	D1				.821	.844
	D2				.850	.888
	D3				.871	.886

Confirmatory Factor Analysis

An analysis using structural equation modelling (CFA) was conducted, and the dependent variables that were examined were the investment choices and decision-making behaviours of individuals. Every construct is considered to be autonomous if it has at least three different components. The Root Mean Square Error (RMSEA) value is found to be less than 0.08, while the Goodness of Fit indices, which are calculated by the CFI, GFI, NFI, and AGFI values, are found to be more than the mandatory criterion of ≥ 0.8. The model was found to provide a satisfactory fit in general, according to the findings.

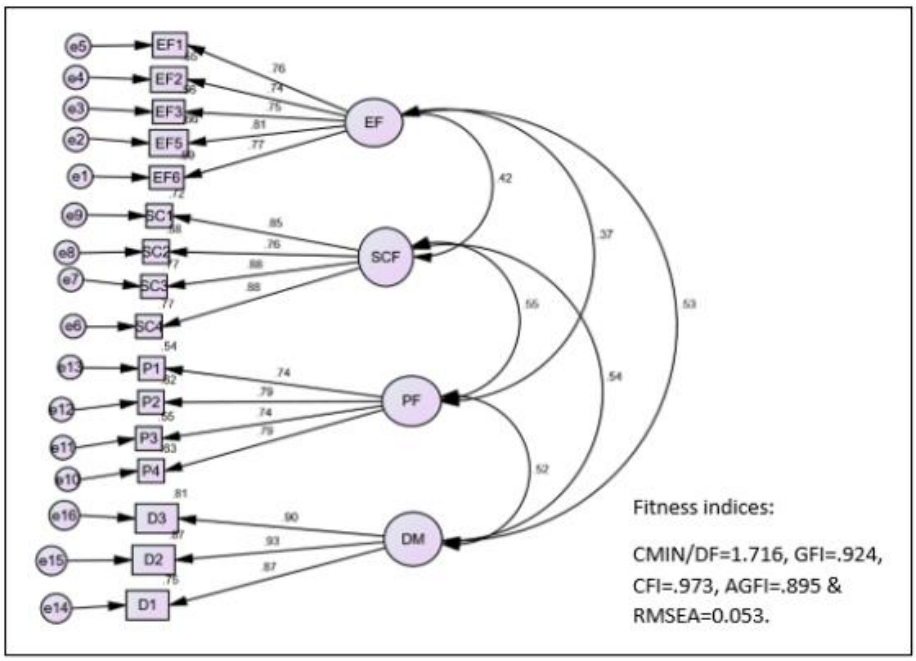

Figure 1: The CFA measurement model

Furthermore, the CFA model was used in order to assess the validity and reliability of the recommended measuring instrument during the course of the research. It was determined that convergent validity was present since the values of the Average Variance Extracted (AVE) for all of the items ranged from 0.584 to 0.811. Due to the fact that the AVE values are higher than 0.5, convergent validity has been fulfilled.

It is possible that the discriminant validity test will provide a negative result if the constructs that are being assessed are not connected to one another. A lower value for the maximum shared variance (MSV) than the average variance estimator (AVE) is required in order to satisfy this validity requirement. All of the

MSV values are lower than the AVE, which means that discriminant validity has been fulfilled. Based on the information shown in table 3, the James Gaskin master plugin was used in order to compute AVE, MSV, and CR.

Table 3: Validity and Reliability of the Measuring Model

	CR	AVE	MSV	Max R(H)	EF	SCF	PF	DM
EF	0.877	0.588	0.285	0.879	**0.767**			
SCF	0.908	0.712	0.303	0.915	0.423***	**0.844**		
PF	0.849	0.584	0.303	0.851	0.374***	0.550***	**0.764**	
DM	0.928	0.811	0.292	0.934	0.533***	0.540***	0.519***	**0.900**

Structural model for hypotheses testing

We will develop a model that integrates structural equation modeling (SEM) and multiple regression analysis (RA) in order to test these assumptions. The purpose of this model is to investigate the relationships between investment choice and the independent variables of risk propensity, asymmetric information, and issue framing. It is possible that the process of testing the hypothesis might be more efficiently arranged with the assistance of the step-by-step structured model and example tables shown below.

Multiple Regression Analysis

Within the framework of Multiple Linear Regression, the investment option will function as the dependent variable, while Risk Propensity, Asymmetric Information, and Problem Framing will be the independent factors. To put our theories to the test, this will be possible.

Regression Model Equation:

$$Y = \beta_0 + \beta_1(Risk\ Propensity) + \beta_2(Asymmetric\ Information) + \beta_3(Problem\ Framing) + \varepsilon$$

Where:

Y = Investment Decision (DV)

β0= Intercept

β1,β2,β3 = Coefficients for each independent variable (IV)

ε = Error term

Dependent Variable (DV):

Investment Decision: This could be a score measuring an investor's decision-making effectiveness or choices (e.g., binary or continuous scale based on portfolio performance or self-reported decision metrics).

Independent Variables (IVs):

- Risk Propensity: A measure of an individual's tolerance for risk in investment choices.
- Asymmetric Information: The degree to which investors perceive they have unequal access to important market information.
- Problem Framing: How an investment decision is framed or presented (e.g., potential gain vs. potential loss framing).

Table Structures for Hypothesis Testing

Data Collection and Descriptive Statistics:

To better understand the distribution of variables, descriptive statistics should be run before regression analysis.

Table 4.

Variable	Description	Type	Scale	Mean	Std. Dev.
Investment Decision (DV)	Measure of investor decisions	Continuous	1-10 Scale	X	Y
Risk Propensity (IV1)	Investor's risk tolerance	Continuous	1-10 Scale	X	Y
Asymmetric Information (IV2)	Perception of unequal information access	Continuous	1-10 Scale	X	Y
Problem Framing (IV3)	Presentation of investment options	Binary (0,1)	Binary	X	Y

Regression Analysis Results

With the use of the regression model, we will investigate the impact that each independent variable has on the variable that is being studied. It is generally accepted that any independent variable that has a p-value that is lower than 0.05 has a significant impact on the decisions that are made about investments.

Table 5.

Variable	Coefficient (β\beta β)	Standard Error	t-Value	p-Value	Significance
Intercept (β0\beta_0β0)	β0\beta_0β0	SE	t-value	p-value	Yes/No
Risk Propensity (IV1)	β1\beta_1β1	SE	t-value	p-value	Yes/No
Asymmetric Information (IV2)	β2\beta_2β2	SE	t-value	p-value	Yes/No
Problem Framing (IV3)	β3\beta_3β3	SE	t-value	p-value	Yes/No

6. Model Summary

An understanding of how well the regression model fits the data may be gained by the calculation of the R-squared value. This number is derived by determining the amount of variation in the dependent variable that can be explained by the independent variables.

Table 6.

Model Fit Statistics	Value
R-Squared	XX
Adjusted R-Squared	XX
F-Statistic	XX
p-Value (Model Fit)	< 0.05

Model Design: Structural Equation Modeling (SEM)

Through the use of structural equation modeling (SEM), it is possible to investigate not just direct and indirect impacts, but also more complex interactions between variables. The variance in the variables is also taken into account by the structural equation model (SEM).

SEM Path Model:

Risk Propensity → Investment Decision

Asymmetric Information → Investment Decision

Problem Framing → Investment Decision

The structural equation modeling (SEM) technique allows for the acquisition of a variety of metrics, including RMSEA, CFI, and TLI, as well as standardized path coefficients, statistical significance, and model fit metrics.

Table 7.

Path	Standardized Coefficient	Standard Error	t-Value	p-Value	Significance
Risk Propensity → Investment Decision	Path coefficient	SE	t-value	p-value	Yes/No
Asymmetric Information → Investment Decision	Path coefficient	SE	t-value	p-value	Yes/No
Problem Framing → Investment Decision	Path coefficient	SE	t-value	p-value	Yes/No

Model Fit Indices for SEM:

RMSEA: Root Mean Square Error of Approximation (acceptable if < 0.08)

CFI: Comparative Fit Index (acceptable if > 0.90)

TLI: Tucker-Lewis Index (acceptable if > 0.90)

Table 8.

Fit Index	Value	Threshold
RMSEA	XX	< 0.08
CFI	XX	> 0.90
TLI	XX	> 0.90

Testing Results Interpretation:

H01 will be rejected, suggesting that risk propensity significantly influences investment decisions, if the p-value for Risk Propensity (IV1) is less than 0.05.

The substantial influence of asymmetric information will be shown by rejecting H02 if the p-value for Asymmetric Information (IV2) is less than 0.05.

H03 will be rejected, suggesting that issue framing has a substantial influence, if the p-value for issue Framing (IV3) is less than 0.05.

For the purpose of determining the statistical significance of each independent variable, t-tests will be used inside the framework of the regression analysis. If the p-value for that variable is less than 0.05, which suggests that there is a statistically significant correlation, then we may decide to reject the null hypothesis for that variable. The value of R squared will be used in order to assess the overall model fit and determine the extent to which the independent variables can account for the variance in the dependent variable. In the event that any of the coefficients 1, 2, 3, β 1, β 2, and β 3 are shown to be statistically significant, the null hypothesis will be rejected. The fact that this is the case suggests that the relevant psychological or economic component has a substantial impact on the decision-making process regarding investments. We are going to undertake model diagnostics in order to further ensure that the regression model is robust. These diagnostics will involve analyzing the residuals to determine whether or not they are normal and whether or not they are multi collinear (using the Variance Inflation Factor, or VIF).

7. CONCLUSION

One of the primary focuses of this study was to investigate the variables that influence investing in the stock market in India. The purpose of this study was to investigate the factors that individuals in India consider to be the most significant when making a decision to invest their money in the stock market in that country. The success of the firm's stock, dividends, financial statements, press coverage (both positive and negative), and the status of the company in the market are all important factors to take into account. Because of this discovery, governments and business administrators are able to place a greater emphasis on economic considerations when formulating plans for their shares. This is because economic variables are more closely related to the characteristics and performance of a company. The importance of providing investors with daily information on the state of the market or stocks is growing. It is for this reason that businesses need to make efforts to enhance their public image by addressing any unfavorable impressions, encouraging good word of mouth, or being active on social media and other types of advertising. In addition to the individual's social and cultural environment, the individual's inner drive is another factor that plays a role in determining their investment decisions. Individuals believe that investing in the stock market is a high-risk activity; hence, they seek the guidance of specialists, stock brokers, friends, and colleagues when making financial decisions.

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