

Investor Rationality beyond Planning: An Empirical Study of Investment Plan Execution

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ABSTRACT

This study examines the execution of investment plans among individual stock market investors in Kerala within a behavioural finance framework. While traditional finance assumes that rational investment planning naturally translates into optimal outcomes, behavioural evidence suggests that execution often deviates due to cognitive and emotional biases. Using primary data collected from 327 individual equity investors in Kerala, the study analyses the extent to which investors adhere to predefined investment plans and investigates variations in execution behaviour across socio-demographic characteristics. The findings reveal that the overall level of execution of investment plans is moderate, indicating persistent behavioural frictions despite awareness of rational planning principles. Significant differences in execution are observed across gender, educational qualification, occupation, income level, and investment experience, while age does not appear to be a differentiating factor. The results highlight that behavioural biases and contextual factors interfere with disciplined execution, thereby limiting rational investment outcomes. By explicitly focusing on the post-decision phase of investment behaviour, the study contributes to behavioural finance literature by demonstrating that execution constitutes a distinct and critical dimension of investor rationality. The findings carry important implications for investor education, advisory practices, and regulatory initiatives aimed at improving long-term investment outcomes...

Keywords: Execution of investment plans, behavioural finance, investor rationality, individual investors, socio-demographic factors, stock market..

1. INTRODUCTION:

Traditional finance theory assumes that investors are rational agents who make objective, goal-oriented, and consistent decisions based on complete information. Classical economic theories and the efficient market hypothesis posit that security prices fully reflect all available information and that investors cannot systematically outperform the market through active strategies (Fama, 1965). Within this framework, rational investing involves proper planning and disciplined execution of investment activities (Noorani, 2016).

Rational decision-making models emphasize structured processes involving problem identification, information search, evaluation of alternatives, and optimal choice (Mintzberg et al., 1976; Hammond et al., 2002; Robbins & Judge, 2007). However, such models implicitly assume that once an investment plan is formulated, execution follows seamlessly. **Empirical evidence suggests otherwise.**

In reality, individual investors frequently deviate from rational behaviour due to emotional responses, cognitive limitations, and behavioural biases. Even when investors engage in systematic planning, execution of investment plans often becomes inconsistent. Execution refers to adherence to predefined strategies regarding entry and exit timing, maintenance of risk-reward ratios, documentation, and patience between investment decisions. Failure in execution can lead to sub-optimal returns despite rational planning.

The Indian stock market context illustrates this paradox clearly. Although equity markets have delivered superior long-term returns compared to traditional assets such as gold and fixed deposits, retail participation remains limited. A substantial proportion of demat accounts are inactive, indicating a disconnect between investment intent and actual execution. Kerala accounts for only 2.53 percent of total demat accounts in India, with a large share remaining inactive due to past losses, lack of time, and brokerage-related issues.

Behavioural finance challenges the assumption of perfect rationality by demonstrating that investors are influenced by systematic biases such as overconfidence, herding, and the disposition effect (Kahneman & Tversky, 1979; Odean, 1998). These biases distort judgment and interfere with execution, causing investors to abandon plans during market volatility, hold losing stocks excessively, or sell winning stocks prematurely. Consequently, rationality in investment decisions is not absolute and fluctuates over time.

In this context, the present study examines the execution of investment plans among individual stock market investors in Kerala, with particular emphasis on socio-demographic factors, behavioural biases, and their association with rational investment decisions and realised returns.

Significance of the Study

The study is significant as it focuses explicitly on **execution of investment plans**, an area that has received limited empirical attention compared to investment choice

and portfolio selection. Existing literature extensively documents behavioural biases influencing decision-making, yet relatively few studies examine how these biases affect the implementation of planned investment strategies.

Prior research shows that individual investors often exhibit short investment horizons, rely heavily on informal information sources, and fail to apply systematic analytical tools (Odean, 2013). Such behaviour exposes investors to heuristics and biases that undermine rationality. Evidence from Indian markets suggests that behavioural inefficiencies have resulted in substantial wealth losses for individual investors, amounting to a measurable proportion of national savings (De et al., 2012).

This study contributes to behavioural finance literature by empirically linking investment planning, execution, behavioural biases, and rationality within a unified framework. By treating execution as a measurable construct, the study extends rationality analysis beyond decision formation to decision implementation.

Further, the study addresses a geographical research gap by providing Kerala-specific evidence. Given Kerala's high literacy levels and increasing exposure to equity markets, understanding why rational planning does not consistently translate into disciplined execution is of considerable academic and practical relevance.

2. METHODOLOGY

The present study, based on primary data, is both descriptive and analytical. The primary data were obtained through a standardised questionnaire. The Purposive sampling technique was used in the study for the collection of primary data. For the design of the questionnaire, researchers developed investment decisionmaking questions that consist of socio-demographic profile of investors and execution of investment plans. Comments received from critics helped to appropriately sequence the questions and simplify the wordings of technical terms. The questionnaire was pre-tested on 100 respondents from various places in Kerala who were asked to fill up the questionnaire without any questions being explained. The meaning of each question was then explained and respondents were requested to review their answers in the light of the explanations given. Those questions for which their responses got changed were examined in detail and necessary modifications were made so that the questions become easier to comprehend.

The Population of the research consists of individual stock market investors of Kerala State. Data shows that the majority of the investors opening demat accounts in Indian stock market remain inactive. Three out of four demat accounts are inactive; an analysis by big data and stock market tracking firm Market Mojo has revealed. Indian stock market has demat accounts with two depository participants: Central Depository Services Ltd (CDSL) and National Services and Depository Ltd (NSDL). CDSL holds 1.97 crore demat accounts while NSDL holds 1.96 crore. A total of 3.93 crore stock market investors were registered in India during March 2020, of which only 0.95 crore were active. Table 1.1 shows that

Kerala accounts for only 2.53 percent of total demat accounts opened in India. So, it can be inferred that around 2.23 lakh accounts were active in Kerala during March 2020. Since the population is infinite, the sample size was calculated by using Cochran's formula. The following equation proposed by Cochran has been applied to determine the sample size of rational investors with 95 percent confidence level and $e = 0.5$. Cochran's formula is considered especially appropriate in situations with large populations. A sample of any given size provides more information about a smaller population than a larger one, so there's a - correction through which the number given by Cochran's formula can be reduced if the whole population is relatively small. So, the sample size is 327. A total of 500 samples were collected for the study. But after considering omissions, 327 samples (investors) have been taken for the study.

Planning of investment is worthless if the execution of such plans fails. Therefore, how to execute the plans are of great importance to achieve a fair rate of return on investment. Behavioural biases and socio-demographic characteristics play a vital role in the degree of execution according to the set plans. If the execution process deviates from plans, then there are chances to fetch sub-optimal return on investment, which is proof of low or moderate rationality in the decision making of individual investors. A lot of information available in the market on which the investor's dilemma is to how to take decisions. Literature also states that the investors overreact to the private information than the public information (Daniel et al., 1998). A number of TV channels, YouTube, and other social media in front seats may give calls on the stocks which the investors hold as per their investment plans. But the electronic as well as social media can hamper the investors' sentiments and compel them to change their original plans. Therefore, to stick to the original plan is rather difficult as far as the individual investors are concerned. Once an investor enters into an investment (buying of a stock), the next and last phase kicks in - the method in which he or she squares off the investment position (selling / holding of the stock bought earlier). Planning of investment and execution of those plans shall be in SIP (Systematic Investment Plan) and in SWP (Systematic Withdrawal Plan) modes to ensure an above average rate of return. Hence, the researchers developed a schedule for the execution of investment plans which contains five statements.

3. RESULTS AND DISCUSSION

Table 1: Descriptive statistics and test of significance of execution of investment plan

Execution of Investment Plan	Mean	SD	t	p value
I Keep a detailed record of my Investment Plan	3.80	1.240	11.595	.000

I always stick on to my plans irrespective of market conditions	3.25	1.539	2.983	.003
I always make proper entry and exit from a stock as per my plan	3.93	.908	18.584	.000
I always maintain a proper risk reward ratio in my Investment Plan and follow it strictly	3.31	1.486	3.795	.000
After exiting from a stock, I patiently wait for the next best opportunity	3.87	1.131	13.881	.000
Overall	3.632	1.2608	62.71	.000

Source: Computed from primary data

Table 1. shows that the overall execution of the investment plan of the respondents is moderate (3.63). One sample t test was applied and found that all the items were significant. In the case I always make proper entry and exit from a stock as per my plan and have high mean score and t value. From this it can be generalised that investors make proper entry and exit from a stock. From this analysis the researchers may lead to the fact that the execution of plan is one of the strongest factors which influence the Kerala stock market investors.

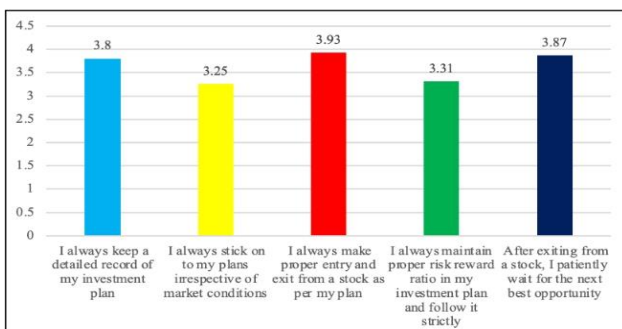


Figure 1 Mean scores of items of execution of investment plan

Table 2: Test of significance in the execution of investment plan based on the gender

	Gender	N	Mean	SD	t	p value
Execution of Investment Plan	Male	210	19.13	4.348	5.60	.000
	Female	117	16.43	3.863		

Source: Computed from primary data

Table 2 shows that the obtained t value 5.60 is significant at 0.05 level. That means gender is a significant factor that makes differences in the execution of investment plans. The mean value of male investors 19.13 is greater than the mean score of female investors 16.43. So it can be concluded that male investors have a high level of execution of investment plan than females.

Table 3: Test of significance in the execution of investment plan based on the age and levels of education

		Sum of Squares	df	Mean Square	F	p value
Age	Between Groups	67.158	4	16.790	.877	.478
	Within Groups	6163.251	322	19.141		
	Total	6230.410	326			
Education	Sum of Squares		df	Mean Square	F	p value
	Between Groups	248.788	3	82.929	4.478	.004
	Within Groups	5981.621	323	18.519		
	Total	6230.410	326			

Source: Computed from primary data

Table 3 shows the obtained F value for the Execution of Investment Plan is .877, based on the age of investors is not significant at 0.05 level. That means there is no difference in the execution of the investment plan. So, it can be concluded that age is not a significant factor in the execution of the investment plans. The obtained F value for education is 4.478 is significant at 0.05 level ($F=4.478, p<0.05$). That means there is a significant difference in the execution of the investment plan based on their educational level. In order to find the difference in the execution based on the educational level of investors, the researchers used Scheffe post hoc test.

Table 4: Scheffe Post Hoc Test on execution of investment plan based on the levels of education

Level of Education	N	Subset for alpha = 0.05	
		1	2
Graduation	84	17.42	
Post-graduation	133	17.79	
Professional	77	18.66	18.66
Diploma	33		20.39

From Table 4, it is clear that the mean score of diploma holders 20.39 is significantly differ from that of the post-graduates (17.42) and graduate holders (17.79.) That means, diploma holders rely more on the execution of plans when compared to graduates and post graduates.

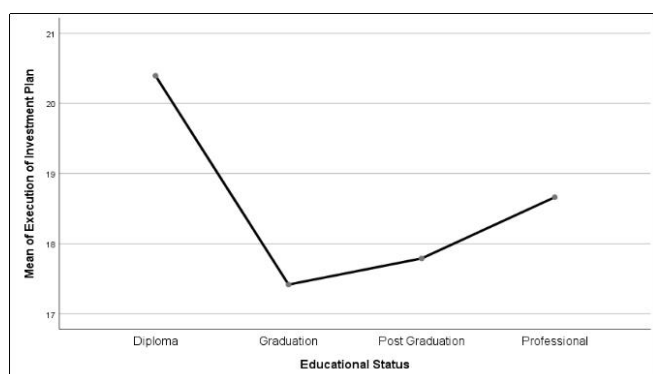


Figure 2: Execution Investment Plan based on the levels of Education

Table 5: Test of significance in the execution of investment plan based on the occupation

	Sum of Squares	df	Mean Square	F	p value
Between Groups	656.523	5	131.305	7.56	.000
Within Groups	5573.887	321	17.364		
Total	6230.410	326			

Source: Computed from primary data

Table 5 shows that the obtained F value 7.56 is significant at 0.05 level ($F=7.56$, $p<0.05$). That means there is a significant difference in the execution of investment plan based on their occupation. In order to find out the

difference in the execution based on the occupation of the investors the researchers used Scheffe post hoc test.

Table 6: Scheffe Post Hoc Test on execution of investment plan based on the occupation

Occupation	N	Subset for alpha = 0.05	
		1	2
Unemployed	38	14.39	
Govt. Employee	46		18.07
Self Employed	107		18.50
Practicing Professionals	24		18.54
Private Employee	81		18.93
Ex NRIs	31		19.48

From Table 6 it is clear that the mean score of the execution of investment plan of Ex NRIs is 19.48, private employees 18.93, practicing professionals 18.54, self-employed 18.50, government employees 18.07 are significantly differ from that of the unemployed investors. So, it can be concluded that unemployed investors have very low level of execution of their investment plans.

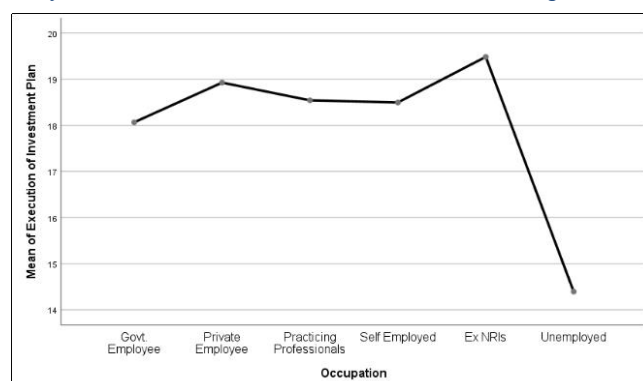


Figure 3 Execution investment plans based on the occupation

Table 7: Test of significance in the execution of investment plan based on the annual income

	Sum of Squares	df	Mean Square	F	p value
Between Groups	837.412	3	279.137	16.718	.000
Within Groups	5392.998	323	16.697		

Total	6230.410	326			
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Source: Computed from primary data

Table 7 shows the obtained F value 16.71 is significant at 0.05 level ($F=16.71$, $p<0.05$). That means there is a significant difference in the Execution of Investment Plan based on their annual income. In order to find the difference in the execution based on the annual income of investors investigators used Scheffe Post hoc Test.

Table 8: Scheffe Post Hoc Test on execution investment plans based on the annual income

Annual Income	N	Subset for alpha = 0.05	
		1	2
5 to 10 Lakh	75	16.72	
< 5 Lakh	96	17.51	
10 to 15 Lakh	100	17.98	
>15 Lakh	56		21.54

The mean score of Execution of the investment plan revealed that investors in the category of above >15 lakh (21.54) is significantly differ from the low-income groups. It can be concluded that the higher income group of investors execute the Investment Plans better than that of the lower income groups.

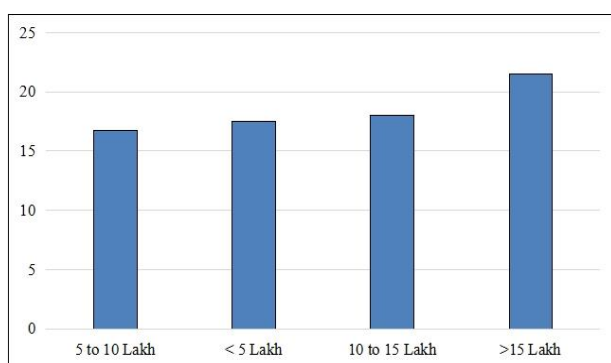


Figure 4 Execution investment plans based on the annual income

Table 9: Test of significance in the execution of investment plans based on the years of investment experience

	Sum of Squares	df	Mean Square	F	p value
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Between Groups	260.296	3	86.765	4.694	.03
Within Groups	5970.114	323	18.483		
Total	6230.410	326			

Source: Computed from primary data

Table 9 shows the obtained F value 4.69 is significant at 0.05 level ($F=4.69$, $p<0.05$). That means; there is a significant difference in the execution of the Investment Plans based on the years of experience of the respondents. In order to find out the difference in the execution based on the year of experience of investors; the researchers used Scheffe Post Hoc Test.

Table 10: Scheffe post hoc test on execution of investment plans based on years of investment experience

Years of experience	N	Subset for alpha = 0.05
		1
< 5 Years	138	17.68
5 to 10	117	17.72
15 to 20	19	19.16
10 to 15	53	20.04

From Table 10, it is clear that the mean score of the execution of investment plan for 10 to 15 years of experience is 20.04, 15 to 20 years is 19.16, 5 to 10 years is 17.72 and less than 5 years of experience is 17.68. The mean difference between <5 years of experience and 10 to 15 years differs significantly (2.36). So, it can be concluded that when investment experience is more, such investors stick to high level of execution as per the investment plans.

Findings of the Study

The overall level of execution of investment plans among individual stock market investors in Kerala is found to be moderate, indicating that investors do not consistently adhere to their predefined investment strategies.

The one-sample *t*-test results reveal that all components of execution of investment plans—such as maintaining records, following entry and exit rules, adhering to risk-reward ratios, and patiently waiting for new opportunities—are statistically significant, confirming that execution behaviour is a meaningful construct in investment decision-making.

A statistically significant difference is observed in the execution of investment plans based on gender. Male

investors exhibit a higher level of execution discipline compared to female investors, indicating gender-based variation in adherence to investment plans.

Age does not have a significant influence on the execution of investment plans. This finding suggests that execution discipline is not necessarily associated with chronological age.

A significant difference is found in the execution of investment plans based on educational qualification. Diploma holders demonstrate a higher level of execution discipline compared to graduates and postgraduates.

Occupation significantly influences execution behaviour. Ex-NRIs, private employees, practicing professionals, self-employed individuals, and government employees exhibit significantly higher execution levels than unemployed investors.

A statistically significant difference is observed in the execution of investment plans based on annual income. Investors in the higher income category (above ₹15 lakh per annum) show substantially better execution discipline than lower income groups.

Investment experience has a significant impact on execution behaviour. Investors with longer experience in the stock market demonstrate higher adherence to their investment plans compared to less experienced investors.

The findings collectively indicate that execution of investment plans improves with financial capacity, occupational stability, and market experience, while behavioural and situational constraints weaken execution discipline.

The results confirm that deviations in execution behaviour contribute to moderate levels of rationality among individual investors, despite awareness of rational investment planning principles.

Implications of the Study

From a behavioural finance perspective, the findings reaffirm that rationality is bounded and fragile during the execution phase. Even when investors demonstrate awareness of planning principles, behavioural biases interfere with disciplined execution (Nozick, 1993; Simon, 1956). The moderate level of execution observed among investors supports the argument that self-control problems persist despite experience and access to information.

Differences in execution behaviour across gender, education, occupation, income, and investment experience suggest that rationality is not uniformly distributed among investors. Higher income and experienced investors display stronger execution discipline, indicating learning effects and reduced emotional pressure (Chen et al., 2007). Conversely, unemployed and low-income investors exhibit weaker execution, reflecting heightened sensitivity to losses and uncertainty.

For policymakers and regulatory institutions, the results imply that investor awareness programmes must extend

beyond financial literacy and product knowledge. Greater emphasis should be placed on behavioural aspects of execution, including loss management, plan adherence, and emotional regulation during market fluctuations.

For financial advisors and intermediaries, the findings highlight the need to support investors throughout the investment lifecycle, particularly during periods of market stress when deviations from plans are most likely.

Suggestions

Based on empirical findings and insights drawn from the literature, the following suggestions are proposed:

Execution-Focused Investor Education
Investor education initiatives should emphasize execution discipline, including adherence to predefined entry–exit strategies and risk management rules.

Behavioural Awareness programmes
Bias programmes should highlight how overconfidence, herding, and the disposition effect distort execution and lead to sub-optimal returns (Shefrin & Statman, 1985; Odean, 1998).

Structured Investment Frameworks
Investors should be encouraged to integrate fundamental analysis, technical analysis, and disciplined buying–selling strategies into a coherent execution framework.

Targeted Interventions
Special support mechanisms may be designed for unemployed, low-income, and novice investors who exhibit weaker execution discipline.

Continuous Monitoring
Financial advisors and brokerage platforms should provide ongoing feedback to help investors identify deviations from their plans and correct behavioural errors over time.

CONCLUSION

The study signifies execution of investment plans as a critical determinant of rational investment behaviour. While traditional finance assumes that rational planning leads to optimal outcomes, behavioural evidence from individual investors in Kerala reveals that execution remains a major bottleneck. The findings show that execution discipline is moderate overall and varies significantly across socio-demographic and experiential factors. Behavioural biases systematically interfere with disciplined execution, confirming that rationality is neither static nor universal in real-world investment environments. By integrating investment planning, execution, behavioural biases, and rationality within a single analytical framework, the study makes a meaningful contribution to behavioural finance literature and addresses a notable research gap in the Indian context. Enhancing investor return requires not only better planning tools but also behavioural mechanisms that support consistent execution under uncertainty

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