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An Experimental Study of Investor Responses to ESG Mutual Fund Strategies among Investors in Kerala

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Abstract

This study investigates how investors in Kerala perceive and respond to various ESG (Environmental, Social, and Governance) mutual fund strategies, focusing on their awareness, attitudes, and decision-making factors. Data was gathered from 251 investors using a structured Google Form with a 5-point Likert scale, and quantitative analysis was conducted using SPSS. A convenient sampling technique was adopted for the study. The findings reveal a moderately adequate level of awareness and knowledge among investors regarding ESG mutual funds, with varied perceptions based on the type of ESG strategy employed. Exclusion strategies tend to be avoided, whereas inclusion and engagement strategies are more favorably viewed. Key influences on investment decisions include perceived effectiveness and long-term performance, while demographic variables like age and education have a limited impact. However, gender differences were observed, with female investors demonstrating slightly higher awareness. The study also highlights the need for targeted educational initiatives, particularly among younger investors, to improve their understanding of ESG principles and enhance investment quality. While ESG investing is gaining traction, regional nuances such as cultural values, economic context, and investor preferences significantly shape its adoption in Kerala. This research offers original and region-specific insights into investor behaviour regarding ESG mutual funds and emphasises the importance of investor education and strategy-specific communication by fund managers. The study's value lies in its focused exploration of Kerala's ESG investment landscape, combining empirical data with strategic implications to align ESG fund offerings with investor expectations better.

Keywords: *investment strategies, ESG mutual fund, investor responses, quantitative research, statistical analysis.*

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1. Introduction

Environmental, Social, and Governance (ESG) mutual funds have emerged as one of the fastest-growing investment products in many parts of the world, reflecting an increasing awareness of issues related to sustainability, ethical management, and responsible investment (Kapil & Rawal, 2023; Dmuchowski *et al.,* 2023) (Gangi *et al.,* 2022) (Vishali & MK, 2024). In India, specifically in Kerala, awareness of ESG investments is increasing, judging by how the recent number of investors have shown interest in aligning their portfolios with values that centre around environmental and social issues (Singhania & Saini, 2022) (Sreelekshmi, 2022). ESG fund strategies generally involve exclusion (aversion from damaging sectors such as tobacco or fossil fuels), inclusion (preferencing companies with robust ESG performance), and engagement (actively shaping company behaviour through shareholder rights). However, not much study has been done on Keralan investors' perceptions of ESG mutual funds and the variables influencing their investment decisions (ID) (Biju *et al.,* 2023) (Kurniawati *et al.,* 2022). This study aims to quantify investor awareness of and reaction to the ESG mutual fund strategy.

The survey would use questionnaires and quantitative research techniques to achieve the study's goals. The structured questionnaire in the survey, with Likert scale statements, would be employed to measure levels of awareness among investors, perceptions of ESG strategies, and risk tolerance and their influence on ID. The data, after collection, would then be statistically analysed using techniques such as descriptive statistics, correlation analysis, and regression modelling. These will aid in determining patterns and relationships between the variables, such as awareness and risk tolerance, with decision-making behaviour (Ahmed *et al.,* 2021; Bhandari & Hallowell, 2022).

One advantage of adopting the quantitative approach is its potential for large-scale, measurable data gathering; hence, statistical analysis can be adopted to identify trends and relationships. This proves valuable in an objective analysis of investor behaviour and generalising based on sample populations (Becchetti *et al.,* 2022). However, the quantitative approach has deficiencies in capturing the complexity of personal experiences or profound reasoning for investors' choices. The reliance of the survey on self-reported data may also introduce biases related to overestimation or underestimation of awareness and decision factors (Aristei & Gallo, 2021).

This research is needed to address the present lacuna and understand investors' views on ESG MF investment strategies in Kerala. The findings, which focus on knowledge levels and decision-making criteria, will assist fund managers and legislators in developing ESG-focused products that appeal to investors' preferences. This, in turn, would encourage greater participation in ESG investments, ensuring long-term development goals in the financial industry. The main objectives of the study include

- To assess the awareness and understanding of ESG mutual funds among investors in Kerala.
- To evaluate investor attitudes and responses to various ESG mutual fund strategies.
- To explore factors influencing ID in ESG mutual funds.

The rest of the research is organised as follows: Section 2 discusses antecedent research studies. The research methodology will be discussed in detail in the third section. The empirical outcomes of data analyses are presented in the fourth section. It analyses the results of questions about the correlation. It summarises the research findings by extracting the most critical information and conclusions from data analysis. Section 5 presents the Discussion of findings, while Section 6 shows the study's conclusion. Section 7 shows the Practical implications. The contribution of this study is to reveal findings that influence industrial strategy, provide information about the value of policy decisions, and inform further studies.

2. Literature Review

2.1. ESG Mutual Funds and Investor Awareness

Oza and Singhal's (2024) study on the growing importance of ESG investing in India outlines ESG criteria and their worldwide acceptance. They also

point out that, while ESG investing is still relatively new in India, increasing investors recognise its long-term sustainability and ethical focus. Jonwall et al. (2023) compare socially responsible investors to conventional ones and report that, in general, socially responsible investors in India are becoming more informed and making ESG-conscious investments with increasing likelihood. It was also noticed that this age group was predominantly middle-aged, well-educated, and financially privileged, with higher awareness about ESG issues. Gala et al. (2023) found that male investors were more conscious of ESG factors than females in Kolhapur. The conclusion is consistent with the idea that awareness of ESG in mutual funds may vary by gender.

Surendran (2023) discussed the knowledge of ESG aspects among new MBA finance graduates. Even though the beneficiaries of the literature are competent stock traders, his research revealed a lack of knowledge about the ESG principles applied to their IDs. This highlighted the need for additional education on the ESG factors that must be included in investing processes to be more sustainable. Mandal and Mitra (2023) used primary data from 55 respondents and several statistical tests to analyse investors' perceptions of ESG identification variables in Kolkata. Gender and investment horizon characteristics were not shown to influence views of ESG performance in Kolkata significantly.

2.2. Perceptions of ESG Mutual Fund Strategies (PESG) and Investment Decisions

Investor views have a significant impact on their identification of ESG mutual funds. Thirumalai (2022) investigated the uptake and acceptance of ESG investing in India among investment managers and investors. The findings revealed that organisational growth and long-term success were substantially associated with good perceptions of ESG practices. This hypothesis proposes positive investor perceptions of ESG mutual funds can impact their ID. Mandal & Mitra (2023) also researched ESG elements in ID, concluding that investors in Kolkata are increasingly considering ESG factors in the wake of the global financial crisis. According to their findings, investors' perceptions of the firm's performance based on ESG variables are one of the most important predictors of decision-making. In a similar study, Tiwari et al. (2024) investigated the association between financial advisers' level of ESG awareness and their attitude toward promoting ESG funds to clients. Surprisingly, views transferred into real decision-making behaviour, with the study revealing that people who perceived ESG techniques more positively were more inclined to advocate those investments.

Carlsson Hauff & Nilsson (2023) studied retail investors' perceptions of ESG mutual funds due to variations in how different underlying ESG strategies are employed for exclusion, inclusion, and engagement. In their two experiments, comprising 261 and 437 participants, the inclusion strategy was preferred over the other strategies in their experiments, and this also had significant effects on perceived mutual fund quality as a function of perceived financial quality. In addition, perceived quality improved with the availability of in-house sustainability experts through improved financial expectations. Park & Jang (2021) developed an ESG framework for South Korea by applying the AHP model to determine how much more important global factors were compared to country-specific ones. According to the research, environmental and governance factors proved more critical than social factors. However, country-specific factors such as the reputation of the chief executive officer of South Korea proved to be significant causes of ID, hence providing a model applicable to other emerging markets.

2.3. Risk Tolerance and Investment in ESG Mutual Funds

Risk tolerance is a key consideration when investing in ESG mutual funds. According to research by Assaf et al. (2024) on French investors, ratings based on ESG criteria frequently represent a range of risk-taking inclinations and attitudes. According to their research, investors are more willing to pay a premium for good ESG scores when they have a larger risk tolerance. Satish et al. (2023) report that demographic factors like age and wealth impact risk tolerance and ESG ID in Chennai. Their findings support the theory that an increased inclination to invest in ESG mutual funds is

correlated with an improved risk tolerance. In their study of Indian retail investors, Mishra et al. (2023) incorporated the BRT framework. They discovered that religious views and other personal values significantly influenced judgments about investing in socially conscious funds. Because it leads after their moral or socially conscious ideals are satisfied with accepting such risks, risk tolerance in this instance influences decisions.

The effects of financial literacy and ESG factors on ID among East Javan college students were studied by Nabila & Haron (2023). Using a quantitative methodology, cluster random selection among 214 respondents, and online surveys, the findings demonstrated that economic literacy and ESG awareness have a substantial, favourable impact on capital market investing decisions. The demographic features of investors in ESG and non-ESG stocks were examined by Trisnowati et al. (2023) using ANOVA on data from 415 Indonesian investors. The results show that age considerably impacts ID, but gender, education, experience, and investment quantity have little effect; this is why ESG investors typically fit this profile.

2.4. Studies Supporting ESG Investment Behaviour

The momentum of Prabhu & Yesugade (2023), who represented ESG investing in India and around the world, found that more retail investors are incorporating ESG investing considerations into their decision-making criteria as the practice becomes more well-known for its potential long-term benefits. Their study adds to our understanding of how ESG factors increasingly influence investor behaviour.

2.5. Research Gaps

An evaluation of previous research reveals several knowledge gaps. Few studies particularly measure ESG knowledge among investors in Kerala, even though Oza & Singhal (2024) and Gala et al. (2023) investigate public awareness and highlight the growing importance of ESG investment globally. Furthermore, while Thirumalai (2022) and Jonwall et al. (2023) examine investor attitudes toward ESG, they do not thoroughly understand how investors react to particular ESG mutual fund strategies. Studies like Tiwari et al. (2024) and Mishra et al. (2023) discuss factors impacting ID in ESG funds, but there has not been any thorough investigation of these issues in Kerala. Additionally, research is necessary to fully understand how risk tolerance affects ESG ID in the Keralan setting, as demonstrated by Satish et al.'s (2023) findings. To close these gaps, this study aims to determine how aware Keralan investors are of environmental issues, analyse how they react to various ESG mutual fund strategies, and investigate factors affecting ID in Kerala.

3. Research Methodology

3.1. Research Design

Questionnaire Preparation

The study used a thirty-item structured questionnaire to measure the interrelationship between independent and dependent variables. The independent variables are gender, ESG (PESG) perception, and risk tolerance level (RTL). In contrast, the dependent variables are the awareness level of ESG mutual funds (AESGMF), investment decision (ID), and decision to invest in ESG mutual funds (DIESG). For eliciting these constructs, five questions were constructed for every variable, and a total of fifteen questions for independent variables and fifteen for dependent variables. The questionnaire was thoroughly checked and pre-tested for clarity, relevance, and content validity.

3.2. Response Collection

Data was collected using a structured online survey on a secure Google Forms platform. The survey employed a 5-point Likert scale to capture respondents' agreement level with the different statements related to the constructs. The survey was addressed to individuals between the ages of 26 and 45 who were current investors or possessed investment knowledge about ESG mutual funds. The emphasis was particularly on Kerala residents, which was consistent with the geographic focus of the study. Participation was voluntary, and informed consent was sought from all respondents prior to the administration of the questionnaire. The data collection exercise stressed anonymity and confidentiality.

3.3. Sampling Technique

A non-probability convenience sampling method was employed to choose respondents. This approach was utilised because it is practical and easy to access potential participants within a short time frame. Convenient sampling might be limited in generalizability, but it is suitable for exploratory research where particular regional insights are desired. Participants were recruited via digital outreach, such as social media platforms, WhatsApp groups, email distribution lists, and pertinent online investment forums.

3.4. Statistical Analysis

The answers from 251 valid participants were tested using SPSS (Statistical Package for the Social Sciences). No answers were discovered to be invalid or incomplete. A variety of statistical methods were used to examine the data. Descriptive statistics were used to describe the demographic profile and simple response patterns. Internal consistency was examined using Cronbach's alpha to check the reliability of the questionnaire. Factor analysis was employed to verify the underlying structure of the items on the questionnaire and their consistency with the desired constructs. Correlation analysis was utilised to investigate the relationships among variables, while regression analysis facilitated examination of the predictive ability of the independent variables on the dependent variables. T-tests were also utilised to establish significant differences within demographic subgroups, specifically gender.

3.5. Online Survey

The study conducted in this research involved a large number of participants, consisting of 251 people who voluntarily contributed their opinions and information. Both men and women have participated in the research. Several online platforms, including social media, email lists, and relevant discussion boards, have been utilised to enlist participation. An online survey was utilised to gather information on AESGMF, ID, DIESG and Gender, PESG, RTL, and other variables pertinent to the study objectives and hypotheses. A well-structured questionnaire was specifically designed for this purpose. Data protection has been ensured by hosting the survey on a secure internet platform. The questionnaire is divided into sections that deal with gender, PESG, RTL, AESGMF, ID, DIESG, and demographic data. A structured questionnaire specifically designed to gather data on demographics, perceptions of AESGMF, ID, DIESG, gender, PESG, and RTL, as well as other relevant factors to the research objectives and hypotheses, was used to conduct an online survey. Every participant gave their informed consent before the survey even began. This study's convenient sampling approach produced 251 valid and zero invalid samples.

4. Research Hypothesis:

The study includes the following hypothesis

Hypothesis 1

Null Hypothesis (H_o): There is no significant difference in the level of awareness of ESG mutual funds between Gender (male and female investors in Kerala.

Alternative Hypothesis (H_1): There is a significant difference in the level of awareness of ESG mutual funds between Gender (male and female investors in Kerala.

Hypothesis 2

Null Hypothesis (H_o): Investor perceptions of different ESG mutual fund strategies do not significantly affect their investment decisions in Kerala.

Alternative Hypothesis (H_1): Investor perceptions of different ESG mutual fund strategies significantly affect their investment decisions in Kerala.

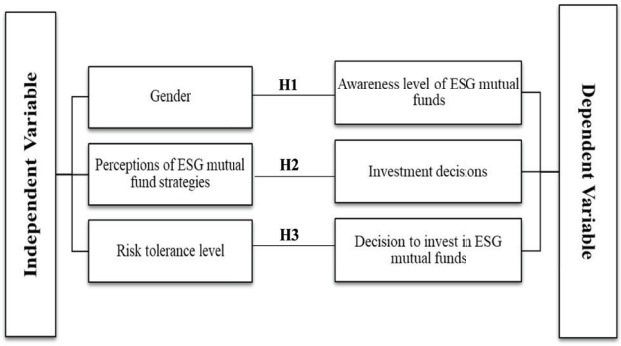
Hypothesis 3

Null Hypothesis (H_o): Risk tolerance does not significantly influence the decision to invest in ESG mutual funds among investors in Kerala.

Alternative Hypothesis (H_1): Risk tolerance significantly influences the decision to invest in ESG mutual funds among investors in Kerala. Figure 1 shows the Conceptual Framework.

Figure 1:

Conceptual Framework



5. Analysis and Interpretation of Data

5.1. Frequency Distribution

The frequency data outlines the sociodemographic profile and investment behaviour of respondents. A significant portion falls within the 26–35 (37.1%) and 36–45 (35.9%) age groups, indicating a middle-aged majority, while only 9% are under 25 or over 45. The gender distribution shows more males (56.2%) than females (43.8%). Regarding education, most respondents are postgraduates (45%), followed by undergraduates (43.4%), with a small proportion of high school graduates (8.8%) and doctorate holders (2.8%).

Regarding employment, most work in government (33.9%) or the private sector (29.1%), while 27.1% are self-employed. Students, retirees, and the unemployed collectively account for a smaller share (1.2%–6%). The monthly income of most respondents ranges from ₹50,001–2,00,000 (34.7%), suggesting a middle-to-upper income class; a smaller group earns below ₹25,000 (4.8%) or above ₹2,00,000 (26.3%).

On investment experience, most have 3–10 years (42.6% for 3–5 years, 45.4% for 5–10 years), while a few have under 1 year (6%) or over 10 years (3.2%). Primary investment interests are concentrated in commodities and ESG mutual funds (36.7%), with lower preferences for equity, debt (10.4%), and real estate (6%).

Respondents show high awareness about ESG mutual funds—77.3% agree or strongly agree that they understand the concept, and 74.9% feel well-informed by financial advisors or media. A similar proportion (73.3%) know the differences between ESG and conventional funds, and 74.9% actively track ESG trends.

Most respondents (78.9%) are confident in explaining ESG benefits, and 80% agree that ESG factors influence their investment decisions. Ethical alignment also matters—77.3% support investing aligned with personal environmental and social values, and 75.3% are more likely to invest if ESG funds offer strong returns.

Belief in ESG's long-term benefits is high (75.7%), and 73.3% state that ESG fund availability influences portfolio decisions. Furthermore, 74.9% are likely to consider ESG funds soon, and 76.9% believe these funds offer stable long-term returns.

A majority (76.5%) believe ESG investing supports ethical corporate practices and recognises the role of past performance (76.1%) and advisor recommendations (78.5%) in shaping their decisions. Enthusiasm is also strong for specific ESG themes: environmental (78.9%), social (79.3%), and governance-focused funds (77.3%). Most respondents (75.3%) believe ESG funds offer both financial gains and social impact.

For long-term investment reliability, 75.7% trust ESG mutual funds as much as traditional options. Risk tolerance is nuanced—75.3% are open to higher risks if aligned with ESG values, but 74.5% show caution toward emerging ESG funds. Despite this, 76.1% prefer low-risk funds even with fewer ESG elements, suggesting a balance between ethics and safety. Notably, 78.1% consider ESG fund risks acceptable long-term, and 77.7% acknowledge that risk perception strongly influences ESG investment readiness.

5.2 Descriptive Statistics

Table 1 presents descriptive statistics for socio-demographic variables and key perceptions of ESG mutual funds. The average respondent falls within the 26–45 age range (M = 2.73, SD = 1.054) and leans slightly male (M = 1.44). Most participants hold undergraduate or postgraduate degrees (M = 2.42, SD = 0.690) and are employed in government or private sectors (M = 3.06, SD = 1.072). Income

levels (M = 3.73, SD = 1.045) indicate a middle to higher-income demographic, with moderate investment experience (M = 3.37, SD = 0.845). Preference for ESG and commodity investments is evident (PIF M = 3.79, SD = 1.317). At the same time, attitudes toward ESG mutual funds (AESGMF, ID, DIESG, PESG, RTL) show moderately positive responses, with means around 3.75–3.82 and relatively low variability, indicating overall favourable perceptions.

Table 1:

Descriptive Statistics for Demographic Characteristics and Key Constructs Related to ESG Mutual Fund Investment

	N	Mean	Std. Deviation	Std. Error Mean
Age	251	2.73	1.054	.067
Gender	251	1.44	.497	.031
Education	251	2.42	.690	.044
Occupation	251	3.06	1.072	.068
Income	251	3.73	1.045	.066
Experience	251	3.37	.845	.053
PIF	251	3.79	1.317	.083
AESGMF	251	3.7753	.88825	.05607
ID	251	3.7833	.88681	.05598
DIESG	251	3.7641	.88208	.05568
PESG	251	3.8183	.90906	.05738
RTL	251	3.7689	.90642	.05721

5.3. Reliability Statistics

Table 2 shows a high level of internal consistency for the 25-item scale, with a Cronbach's Alpha of 0.975. This indicates excellent reliability, confirming that the items consistently measure perceptions and attitudes toward ESG mutual funds.

Table 2:

Internal Consistency Reliability of ESG-Related Constructs (Cronbach's Alpha)

Cronbach's Alpha	Cronbach's Alpha Based on Standardised Items	N of Items
.975	.975	25

5.4. ANOVA

Table 3 presents the ANOVA results, showing significant variance between items. The sum of squares (SOS) for Between Items is 20.187, with a mean square (MS) of 0.841 and an F-value of 1.836 (p = 0.008), indicating significant differences across items. Non-additivity effects are significant with an F-value of 6.286 (p = 0.012). The total SOS is 7281.765, and the overall model F-value is 1.161.

Table 3:

ANOVA Results for Item-Level Variance and Internal Scale Consistency

	Sum of Squares	df	Mean Square	F	Sig
Between People	4512.165	250	18.049		

Within People	Between Items		20.187	24	.841	1.836	.008
	Residual	Non-additivity	2.878[a]	1	2.878	6.286	.012
		Balance	2746.535	5999	.458		
		Total	2749.413	6000	.458		
	Total		2769.600	6024	.460		
Total			7281.765	6274	1.161		

5.5. T-Test

Table 4 presents the T-test results for various variables, showing significant deviations from zero. For age, the t-value is 41.033 with a mean difference of 2.729 (CI: 2.60–2.86). Gender's t-value is 45.832, with a mean difference of 1.438 (CI: 1.38–1.50). Education shows a t-value of 55.515 (MD: 2.418, CI: 2.33–2.50), and occupation has a t-value of 45.167 (MD: 3.056, CI: 2.92–3.19). Income's t-value is 56.585 (MD: 3.733, CI: 3.60–3.86), while experience shows a t-value of 63.188 (MD: 3.371, CI: 3.27–3.48). The PIF has a t-value of 45.568 (MD: 3.789, CI: 3.63–3.95). For ESG mutual fund measures, AESGMF, ID, DIESG, PESG, and RTL all show high significance with t-values ranging from 67.337 to 65.876 and mean differences from 3.764 to 3.818.

Table 4:

One-Sample T-Test Results for Socio-Demographic and ESG Mutual Fund Variables

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Age	41.033	250	<.001	2.729	2.60	2.86
Gender	45.832	250	<.001	1.438	1.38	1.50
Education	55.515	250	<.001	2.418	2.33	2.50
Occupation	45.167	250	<.001	3.056	2.92	3.19
Income	56.585	250	<.001	3.733	3.60	3.86
Experience	63.188	250	<.001	3.371	3.27	3.48
PIF	45.568	250	<.001	3.789	3.63	3.95
AESGMF	67.337	250	<.001	3.77530	3.6649	3.8857
ID	67.588	250	<.001	3.78327	3.6730	3.8935
DIESG	67.607	250	<.001	3.76414	3.6545	3.8738
PESG	66.546	250	<.001	3.81833	3.7053	3.9313
RTL	65.876	250	<.001	3.76892	3.6562	3.8816

5.6. Correlation Analysis

Table 5 shows the correlation analysis, revealing strong positive relationships among variables related to ESG mutual fund strategies. AESGMF has high correlations with ID (0.886) and DIESG (0.918), indicating that increased awareness and understanding of ESG mutual funds are linked to perceptions of their impact and effectiveness. The correlation with PESG is strong at 0.852. ID and DIESG are also highly correlated (0.868), reflecting a close relationship between perceived effectiveness and impact. PESG and RTL show a strong correlation of 0.874, suggesting a connection between perceived effectiveness and long-term satisfaction. The high correlation coefficients suggest a cohesive understanding of ESG mutual funds among investors.

Table 5:

Pearson Correlation Coefficients for ESG Mutual Fund Variables

	AESGMF	ID	DIESG	PESG	RTL
AESGMF	1.000	.886	.918	.852	.839
ID	.886	1.000	.868	.970	.880
DIESG	.918	.868	1.000	.841	.851
PESG	.852	.970	.841	1.000	.874
RTL	.839	.880	.851	.874	1.000

Correlation Coefficient

Table 6 presents the Kendall's tau_b analysis, showing moderate to strong positive correlations among ESG mutual fund variables. AESGMF correlates strongly with ID (0.636) and DIESG (0.643), indicating that increased awareness is significantly linked to perceptions of impact and effectiveness. The correlation with PESG is moderate at 0.549. ID and PESG have a strong correlation (0.839), reflecting a close relationship between perceived effectiveness and impact. DIESG and PESG also show a notable correlation (0.451). RTL shows moderate correlations with AESGMF (0.484) and other variables, indicating alignment with ESG-related perceptions. These results reflect consistent attitudes toward ESG mutual funds among investors.

Table 6:

Kendall's Tau-b Correlation Coefficients for ESG Mutual Fund Variables

	AESGMF	ID	DIESG	PESG	RTL
AESGMF	1.000	.636**	.643**	.549**	.484**
ID	.636**	1.000	.534**	.839**	.498**
DIESG	.643**	.534**	1.000	.451**	.484**
PESG	.549**	.839**	.451**	1.000	.476**
RTL	.484**	.498**	.484**	.476**	1.000

Table 7 presents the Spearman's rho analysis, revealing strong positive correlations between ESG mutual fund variables. AESGMF shows high correlations with ID (0.764) and DIESG (0.755), indicating that awareness of ESG mutual funds is closely linked to their perceived impact. The correlation with PESG is 0.683, showing a significant relationship between awareness and perceived effectiveness. ID and PESG have the highest correlation (0.921), reflecting a powerful link between perceptions of impact and effectiveness. DIESG and PESG are moderately correlated (0.571). RTL shows moderate correlations, especially with AESGMF (0.618) and ID (0.620), suggesting alignment with other ESG-related perceptions. These results reflect a generally consistent view of ESG mutual funds among investors.

Table 7:

Spearman's Rank Correlation Coefficients for ESG Mutual Fund Variables

	AESGMF	ID	DIESG	PESG	RTL
AESGMF	1.000	.764**	.755**	.683**	.618**
ID	.764**	1.000	.659**	.921**	.620**

DIESG	.755**	.659**	1.000	.571**	.609**
PESG	.683**	.921**	.571**	1.000	.593**
RTL	.618**	.620**	.609**	.593**	1.000

5.7. Regression Analysis

Table 8 presents the regression analysis results, highlighting key predictors of investor responses to ESG mutual fund strategies. Gender has an R-squared value of 0.010, explaining just 1% of the variance, with a non-significant F-value (2.551) and p-value (0.112). In contrast, PESG explains 94.1% of the variance (R-squared = 0.941), with a highly significant F-value of 3979.577 and p-value < 0.001. RTL explains 72.5% of the variance (R-squared = 0.725), with a significant F-value of 656.615 and p-value < 0.001. These results emphasize the strong influence of PESG and RTL in shaping investor responses to ESG mutual funds.

Table 8:

Regression Analysis of Predictors for Investor Responses to ESG Mutual Fund Strategies

	R	R Square	Sum of Squares	df	Mean Square	F	Sig.
Gender	.101[a]	.010	2.000	1	2.000	2.551	.112
PESG	.970[a]	.941	185.032	1	185.032	3979.577	<.001
RTL	.851[a]	.725	141.034	1	141.034	656.615	<.001

Coefficients

Table 9 presents the coefficients for predictors of investor responses to ESG mutual fund strategies. In Model 1, gender has a constant value of 3.517 (SE = 0.171) and an unstandardized coefficient (USC) of 0.180, with a non-significant t-value (1.597) and p-value (0.112). In Model 2, PESG shows a constant value of 0.170 (SE = 0.059), USC of 0.946, and a standardised beta of 0.970, with a highly significant t-value of 63.084 and p-value < 0.001. In Model 3, RTL has a constant value of 0.641 (SE = 0.125), USC of 0.829, and a standardised beta of 0.851, with a significant t-value of 25.624 and p-value < 0.001. These results indicate the significant impact of PESG and RTL on investor responses.

Table 9:

Regression Coefficients for Predictors of Investor Responses to ESG Mutual Fund Strategies

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.517	.171		20.518	<.001
	Gender	.180	.113	.101	1.597	.112
2	(Constant)	.170	.059		2.882	.004
	PESG	.946	.015	.970	63.084	<.001
3	(Constant)	.641	.125		5.115	<.001
	RTL	.829	.032	.851	25.624	<.001

Factor Analysis

Table 10 evaluates the data's suitability for factor analysis. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy shows an excellent score of 0.857, indicating strong suitability. Bartlett's Test of Sphericity reveals

a significant correlation matrix, with a chi-square value of 1978.681 (10 df) and a p-value < 0.001, confirming that factor analysis is appropriate for the data.

Table 10:

Factor Analysis Suitability - KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
	Approx. Chi-Square	df	Sig.
0.857	1978.68	10	<.001

6. Discussion

The study aimed to regulate whether male and female investors in Kerala had significantly different levels of awareness regarding ESG mutual funds. According to the regression analysis's findings, respondents' gender is not a major predictor of their awareness of ESG. Its p-value was 0.112 and its R-squared value was 0.010. Thus, gender explains only 1% of the variance in ESG awareness, which is further supported by an F-value of 2.551, representing that the relationship is insignificant. Therefore, the null hypothesis is unquestionable: male and female investors in Kerala have similar levels of awareness of ESG mutual funds. Thus, the alternative hypothesis is refuted by this hypothesis. The findings demonstrate that investors of both sexes have comparable levels of knowledge regarding ESG mutual funds, suggesting that gender has little bearing on the researched population's degree of ESG awareness.

The study aimed to determine whether investor views of varied ESG mutual fund strategies in Kerala significantly impacted their ID. With an R-square value of 0.941 and ability to explain 94.1% of the variation in ID, the regression study shows that PESG is one of the most potent predictors of ID. However, the p-value of less than 0.001 and the F-statistic of 3979.577 further demonstrated that PESG significantly affects ID. As a result, the alternative hypothesis is approved, and the null hypothesis is rejected. The outcome demonstrates that investor views of ESG methods are significant and impact their ID, and that the primary element influencing investor choice is perceived effectiveness. There is a significant correlation between ESG views and ID because investors will include those ESG techniques they believe to be successful in their decision-making.

The third hypothesis investigates whether investors' risk tolerance has a discernible impact on their DIESG in Kerala. The RTL variable, which is utilised as a stand-in for risk tolerance, showed a significant positive correlation with ID in regression analysis. Since the R-squared value is 0.725, RTL can explain 72.5% of ID. The less-than-0.001 p-value and the F-value of 656.615 demonstrate the existence of a powerful predictor of RTL for investor behaviour. As a result of this finding, the alternative hypothesis, which contends that risk tolerance significantly impacts ESG mutual fund ID, is accepted instead of the null hypothesis. Risk tolerance plays a crucial role in ESG-related investing decisions since investors who are satisfied with the long-term performance of their investments and who exhibit higher risk tolerance are more inclined to invest in ESG mutual funds.

7. Conclusion

Research on ESG mutual fund strategies among Kerala investors has yielded valuable insights into investor awareness, attitude, and decision-making. The data also reveals that, despite widespread knowledge of ESG mutual funds, gender-based differences in comprehension and perception are notable. Investors' awareness varies by gender, with women being marginally more aware than men. Furthermore, opinions on different ESG tactics have a significant influence on ID. Investors generally find the inclusion strategy appealing, as it positively affects the perceived effectiveness of RTL. Risk tolerance and perceived financial quality are

two more significant variables that influence ID in the context of ESG mutual funds. Regardless of gender, investors who believe ESG mutual funds are financially advantageous are more likely to invest in them. These results highlight the need for improved education, particularly for novice and younger investors, regarding ESG mutual funds and their strategies. To improve the calibre and effectiveness of investments, policymakers and fund managers would prioritise these insights while re-examining the ESG fund offering and their interactions with various investors.

8. Implication

The findings of this study highlight the crucial role of investor awareness and education in shaping responses to ESG mutual fund strategies in Kerala. Investors should be encouraged to deepen their understanding of ESG principles, as increased knowledge can drive more informed and responsible financial decisions. Fund managers and financial advisors should prioritise transparent communication about the effectiveness of ESG strategies, emphasising their benefits and particularly the inclusiveness approach, which resonates most with investors. Additionally, understanding investor expectations and risk tolerance is essential when designing ESG funds to ensure they align with investor preferences and foster higher satisfaction. The study advocates for targeted educational campaigns to promote ESG awareness and improve investor engagement in decision-making. Financial institutions can strengthen investor trust by focusing on transparency and education, thereby facilitating the growth and success of ESG investments in an evolving market.

Declarations:

Data availability statement

All the data is collected from the simulation reports of the software and tools used by the authors. The authors are working on implementing them using real-world data with appropriate permissions.

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Conflicts of Interest

The authors declare that they have no conflict of interest.

Ethical Approval and Human Participation

No ethics approval is required.

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