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Assessing The Role Of ESG And Sustainability In Shaping Investment Trends In The Indian Automobile Sector

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Abstract: *In recent years, Environmental, Social, and Governance (ESG) factors have gained significant importance among investors seeking ethical and sustainable financial returns. This study examines the influence of awareness of ESG disclosure and awareness of sustainable practices in the automobile sector on investment decisions. The primary objective is to understand whether investor awareness in these areas significantly affects how they perceive and respond to ESG scores while making investment choices. A quantitative research design was adopted, utilizing a structured questionnaire distributed to 250 purposively selected respondents. The study collected data on three major constructs awareness of ESG disclosure, awareness of sustainable practices in the automobile sector, and the impact of ESG scores on investment decisions along with demographic details such as gender, age group, and educational qualification. The results of descriptive statistics revealed a higher level of ESG awareness among respondents with postgraduate and professional qualifications. Inferential analysis using Pearson correlation showed a statistically significant positive relationship between ESG awareness variables and investment decisions, with awareness of sustainable practices showing a stronger influence ($r = 0.298$, $p < 0.001$) compared to ESG disclosure ($r = 0.162$, $p = 0.011$). ANOVA results confirmed significant differences in awareness based on qualification levels. Regression analysis indicated that the two independent variables jointly explained 9.8% of the variance in investment decisions ($R^2 = 0.098$). Structural Equation Modeling (SEM) further validated these findings by confirming the positive path coefficients from both awareness constructs to investment decisions. The study concludes that while ESG awareness especially related to sustainable practices in the automobile sector, influence investment decisions, other factors may also play a significant role. This research highlights the importance of enhancing ESG-related education and transparency to foster responsible and informed investment behavior among retail investors. These insights are valuable for policymakers, financial advisors, and ESG-reporting companies.*
Keywords: Role of ESG, Sustainability, Investment, Indian Automobile Sector

INTRODUCTION:

Environmental, Social, and Governance (ESG) is a framework used to evaluate a company's operations and performance in terms of sustainability and ethical impact. The Environmental component refers to how a business manages its impact on the natural environment. This includes practices related to energy consumption, carbon emissions, waste management, resource conservation, and compliance with environmental laws. Companies with strong environmental practices often engage in reducing their carbon footprint, promoting renewable energy use, and adopting eco-friendly technologies. Investors increasingly consider these factors as indicators of long-term resilience and responsibility. The Social aspect of ESG assesses how a company manages relationships with employees, suppliers, customers, and the communities where it operates. This includes issues such as labor practices, employee welfare, workplace diversity and inclusion, human rights, and community engagement. A company that maintains strong social standards is likely to foster better employee morale, reduce reputational risks, and build stronger brand loyalty. It also demonstrates ethical leadership by ensuring safe working conditions, fair wages, and stakeholder inclusivity.

Governance, the third pillar of ESG, refers to how a company is governed in terms of transparency, ethics, and accountability. It involves board composition, executive compensation, audit practices, shareholder rights, and anti-corruption policies. Strong governance ensures that companies are run effectively and in the interest of all stakeholders. It reduces the risk of mismanagement and fraud while enhancing investor confidence. Governance also plays a vital role in how companies report ESG performance and respond to regulatory and stakeholder expectations. ESG has become a critical lens through which businesses are evaluated, not just for financial returns but also for their societal and environmental impact. It allows investors, regulators, and consumers to identify companies that are better positioned for long-term success and risk mitigation. In today's global economy, where sustainability and ethical business conduct are gaining prominence, ESG is not just a compliance tool but a strategic advantage for firms aiming to attract investment, enhance reputation, and ensure sustainable growth.

Sustainable Practises:

Awareness of sustainability refers to an individual's understanding, knowledge, and consciousness about the need to preserve natural resources, protect the environment, and support social and economic systems that meet present needs without compromising the ability of future generations to meet their own. It involves recognizing the impact of human actions on the planet and the importance of adopting sustainable lifestyles, practices, and business models. This awareness spans various areas such as climate change, pollution, renewable energy, water conservation, circular economy, and ethical consumerism. As people become more informed through education, media, and policy initiatives, sustainability awareness is increasingly influencing consumer behavior, policy decisions, and corporate strategies.

In the context of industries like the automobile sector, sustainability awareness plays a critical role in shaping public perception and market demand. Consumers and investors who are more aware of sustainability issues tend to prefer companies that produce eco-friendly vehicles, reduce emissions, and commit to green manufacturing practices. This awareness also encourages stakeholders to support innovation in electric vehicles (EVs), sustainable supply chains, and clean energy integration. When sustainability awareness is high among the general population, it creates pressure on businesses to adopt more responsible practices, influencing regulatory frameworks and investment decisions in favor of environmentally and socially responsible organizations.

Investment Decision:

Investment decision refers to the influence that various factors such as financial performance, risk assessment, ethical values, and sustainability considerations have on an investor's choice to allocate funds to specific assets or companies. In recent years, traditional investment decisions based solely on profitability and return on investment have evolved to include non-financial parameters such as ESG (Environmental, Social, and Governance) criteria. Investors, especially millennials and institutional players, are increasingly considering a company's environmental footprint, social responsibility, and corporate governance practices before investing. This shift reflects a growing belief that companies committed to sustainable and ethical practices are better positioned for long-term success and lower risk exposure.

When investors are aware of ESG disclosures and sustainable practices, particularly in sectors like the automobile industry, they are more likely to invest in companies that demonstrate a commitment to reducing emissions, adopting clean technologies, and ensuring ethical labor practices. This awareness influences investment behavior by aligning financial choices with personal or institutional values, such as climate action or social justice. Moreover, companies with strong ESG performance often attract more capital, enjoy higher valuations, and gain competitive advantages in the market. Thus, the impact on investment decisions is not only financial but also moral and strategic, reshaping how individuals and institutions approach asset allocation in a sustainability-driven world.

REVIEW OF LITERATURE:

1. **Mishra et.al (2023),** In the research paper titled, "Green portfolio optimization: A scenario analysis and stress testing based novel approach for sustainable investing in the paradigm Indian markets". This study introduces a "green efficient frontier" by integrating ESG ratings into traditional mean–variance portfolio optimization. The model not only improves the environmental profile of investment portfolios but also offers better performance under stress conditions, such as market downturns or economic shocks. By showing that ESG-integrated portfolios maintain resilience and yield superior returns during uncertainty, the study underscores the practical and strategic value of ESG investing in the Indian financial landscape. It calls for broader adoption of ESG metrics by asset managers and retail investors alike.
2. **Saraf & Shastri (2024),** In the research paper titled, "Impact of consumer preferences on decarbonization of transport sector in India". The study employs simulation models to demonstrate how consumer preferences especially environmental awareness are instrumental in accelerating the shift towards low-carbon vehicles like EVs and hybrids. However, the research makes it clear that awareness alone is not sufficient to meet India's aggressive climate goals. Complementary interventions such as

carbon pricing, renewable energy integration, and improved grid infrastructure are critical. The study bridges the gap between ESG awareness and systemic policy support, urging a multi-pronged approach to decarbonization in India's transport sector.

3. **Dutta et.al (2024),** In the research paper titled, " ESG driven pairs algorithm for sustainable trading: Analysis from the Indian market". This paper applies ESG filters to a quantitative trading strategy (pairs trading), showing that ESG-compliant asset pairs not only meet sustainability benchmarks but also outperform traditional strategies in profitability. This result challenges the perception that ESG integration compromises returns. Instead, the study affirms that ESG-aligned trading models are both ethical and financially sound. The findings strengthen the argument for embedding ESG factors into automated financial decision-making processes in the Indian equity market.
4. **Bansal et.al (2021),** In the research paper titled, " Willingness to Pay and Attitudinal Preferences of Indian Consumers for Electric Vehicles". Consumer behavior data in this study reveals a readiness among Indian consumers to pay a premium for EVs that offer faster charging, extended range, and cost-efficiency. These preferences are tightly linked to sustainability concerns. While the study focuses on consumer demand, it indirectly highlights ESG's influence on investment by demonstrating how shifting preferences can drive automakers and investors toward greener product portfolios. Thus, ESG values embedded in consumer demand could shape investment flows and market valuations in the automobile industry.
5. **Pal (2024),** In the research paper titled, " Impact of ESG on Corporate Financial Performance: Analysis of the Indian Automobile Sector". Through regression analysis of CRISIL-rated ESG scores and financial performance data from Indian automobile companies, the study finds no significant direct correlation between ESG scores and firm profitability. This suggests that, at least in the current context, ESG performance is not a consistent predictor of financial success. However, the author maintains that ESG remains important for corporate branding, stakeholder engagement, and regulatory compliance, implying that its strategic importance may not be fully captured by financial metrics alone.
6. **Zhou (2024),** In the research paper titled, " A Literature Review on the Impact of ESG Information Disclosure on the Value of the Automobile Manufacturing Industry".This literature review compiles global evidence to show that transparent ESG disclosure improves investor confidence, enhances firm valuation, and reduces capital costs. However, it also emphasizes the lack of standardized reporting frameworks across countries and industries, including the Indian automobile sector. The study concludes that harmonizing ESG disclosure practices can make ESG metrics more actionable and comparable, thereby strengthening their role in guiding investor decisions and improving firm-level accountability.
7. **Ray et. al (2024),** In the research paper titled, " ESG and Firm Value Linkage: A Case Study in the Automotive Industry". This case study-based research finds that higher ESG performance correlates strongly with improved financial indicators such as return on assets and market valuation. The findings support the notion that ESG is not merely an ethical obligation but also a driver of stakeholder trust and competitive advantage. In the context of India's automotive industry, this relationship is particularly relevant, as firms increasingly face pressure to innovate and adapt to sustainable practices. The study advocates for proactive ESG implementation to enhance brand equity and investor appeal.
8. **Tillu et. al (2024),** In the research paper titled, " Towards sustainable automobile ecosystem in India: Integrated analysis of technical, economic, and ESG dimensions". Using a hybrid ISM-FAHP methodology, this study ranks ESG dimensions on par with technological and economic factors such as EV adoption and hydrogen fuel technology in building a sustainable automobile ecosystem. It presents a V-model framework that integrates policy, technology, and ESG goals to guide decision-making. The authors emphasize that automakers, regulators, and investors must work collaboratively to achieve comprehensive sustainability, with ESG acting as a foundational pillar alongside innovation and economics.
9. **Sarkar et. al (2023),** In the research paper titled, " Role of Environmental, Social, and Governance in achieving the UN Sustainable Development Goals: A special focus on India". This study draws direct connections between strong ESG practices in Indian firms and progress toward the UN's Sustainable Development Goals (SDGs). It argues that ESG transparency and alignment not only benefit corporate performance but also contribute to national and global sustainability agendas. The study recommends that Indian businesses adopt ESG as a long-term strategic lever rather than a compliance burden. It encourages policymakers to incentivize ESG integration to accelerate SDG achievement.

10.**Park & Jang (2021),** In the research paper titled, " The Impact of ESG Management on Investment Decision: Institutional Investors' Perceptions of Country-Specific ESG Criteria". Though global in scope, the study provides insights into institutional investor behavior toward ESG investing in emerging markets like India. It finds that investors do not use a one-size-fits-all ESG evaluation; instead, they emphasize specific dimensions depending on local governance standards. For India, governance (e.g., corporate ethics, board independence) is weighted more heavily than environmental or social factors. This shows that country context shapes how ESG criteria are evaluated, and thus how investment decisions are influenced.

Research Gap:

Despite growing research on ESG (Environmental, Social, and Governance) practices and their influence on investment decisions, there remains a significant gap in understanding how sector-specific sustainability awareness particularly in high-impact industries like the Indian automobile sector affects investor behavior. While global and national studies have explored ESG performance and disclosure in general terms, few have examined the comparative impact of awareness of ESG disclosure versus awareness of sustainable practices within a specific industry context. Moreover, most existing studies focus on institutional investors, leaving a gap in insights into the perceptions and decision-making patterns of retail investors in emerging markets like India. There is also limited integration of behavioral finance dimensions such as education level and demographic factors, which may moderate the ESG-investment relationship. This study addresses these gaps by empirically evaluating how ESG-related awareness influences investment decisions, with a specific focus on the Indian automobile sector.

RESEARCH METHODOLOGY:

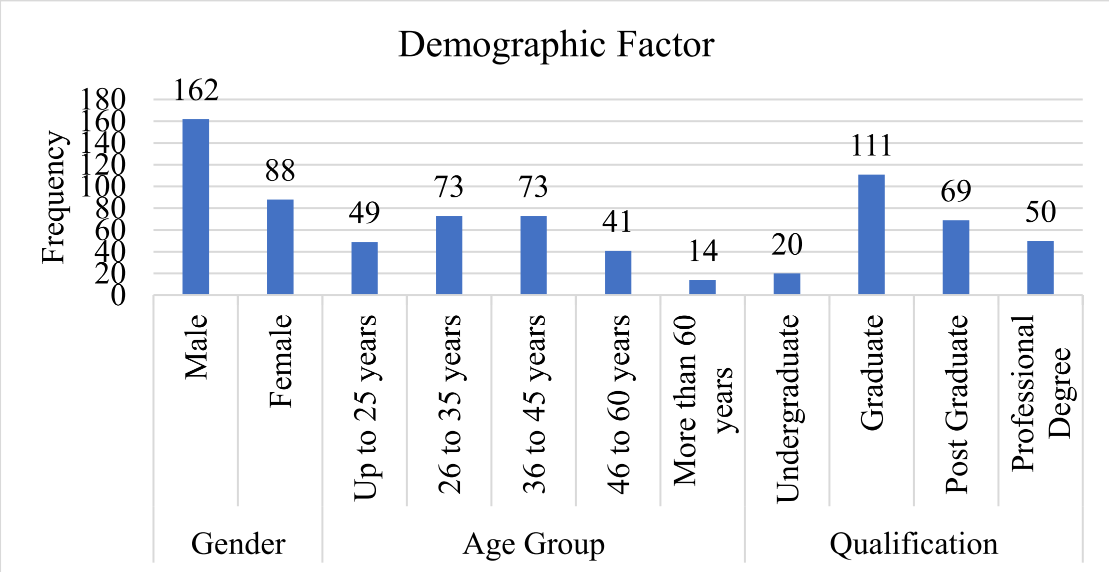
The research employed a quantitative methodology to investigate the impact of awareness of ESG (Environmental, Social, and Governance) disclosure and sustainable practices in the automobile sector on investment decisions. A structured questionnaire was developed and administered to a sample of 250 respondents, selected using purposive sampling, targeting individuals likely to be aware of or influenced by ESG considerations. The questionnaire included items measuring awareness of ESG disclosure, sustainable practices in the automobile sector, and the perceived impact of ESG scores on investment decisions, along with demographic details. The data collected were analyzed using descriptive statistics to summarize demographic characteristics and awareness levels, and inferential statistics such as Pearson correlation, ANOVA, and linear regression to test relationships and group differences. Additionally, Structural Equation Modeling (SEM) was applied to assess the measurement and structural model, evaluating the path coefficients, outer loadings, and outer weights to ensure the reliability and validity of the constructs. This comprehensive methodological approach enabled the researcher to explore not just the strength of relationships among variables but also the underlying measurement structure, providing deep insights into how ESG awareness influences modern investment behavior.

Data Analysis:

The following table indicates the demographic factor of the study:

Sr.no	Demographic Factor	Category	Frequency	Percent
1	Gender	Male	162	64.8
		Female	88	35.2
2	Age Group	Up to 25 years	49	19.6
		26 to 35 years	73	29.2
		36 to 45 years	73	29.2
		46 to 60 years	41	16.4
		More than 60 years	14	5.6
3	Qualification	Undergraduate	20	8.0
		Graduate	111	44.4
		Post Graduate	69	27.6
		Professional Degree	50	20.0

The demographic profile of the respondents reveals a majority of male participants (162) compared to females (88). In terms of age distribution, the most represented groups are those aged 26 to 35 years and 36 to 45 years, with 73 respondents each, followed by up to 25 years (49 respondents), 46 to 60 years (41 respondents), and a smaller portion above 60 years (14 respondents). Regarding educational qualifications, most respondents are Graduates (111), followed by Post Graduates (69) and those holding a Professional Degree (50), while Undergraduates (20) form the smallest group. This demographic spread suggests a well-educated and relatively young to middle-aged sample, with a male majority.



Test of reliability of scale: This test is used for validation of Likert scale used in the questionnaire.
To validate the scale in this study Cronbach Alpha test is applied. Test is applied for all 250 respondents. Following table represents the results of the test:

Sr.no	Variables	No. of Question	Cronbach Value	Accept
1	Awareness of ESG Disclosure	8	.741	Scale is reliable and accepted
2	Awareness of Sustainable Practices of Automobile sector	8	.902	Scale is reliable and accepted
3	Impact of ESG score on investment decision	5	.901	Scale is reliable and accepted

Above results indicate that all the Cronbach Alpha values for all three variables is more than the required value of 0.700. Hence the test is accepted. Conclusion is **scale is reliable and accepted.**

Objective-1: To study the knowledge of ESG Disclosure and Sustainable practices according to the qualification of the Investors.

Null Hypothesis H_{01A}: There is no significant difference in Awareness of ESG Disclosure according to the qualification of the Investors .

Alternate Hypothesis H_{11A}: There is a significant difference in Awareness of ESG Disclosure according to the qualification of the Investors.

To test the above null hypothesis, ANOVA and F-test is applied and results are as follows:

ANOVA					
Awareness of ESG Disclosure					
	Sum of Squares	df	Mean Square	F	P-value
Between Groups	2705.239	3	901.746	6.570	.000
Within Groups	33763.361	246	137.249		
Total	36468.600	249			

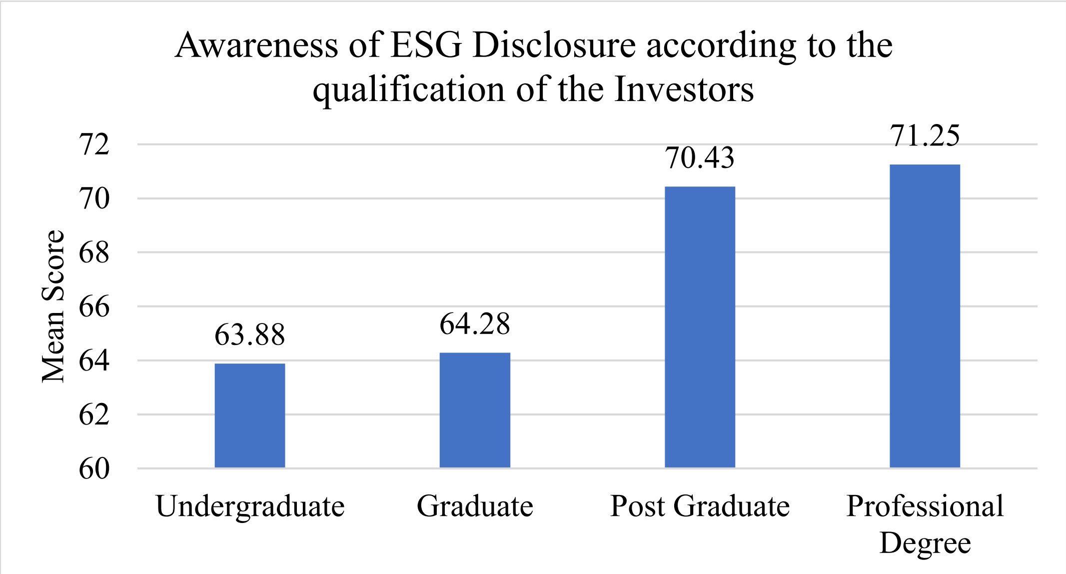
Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore ANOVA and F-test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a significant difference in Awareness of ESG Disclosure according to the qualification of the Investors.

Findings: To understand the findings, mean scores are obtained and presented as follows:

Report			
Awareness of ESG Disclosure			
Qualification	Mean	N	Std. Deviation
Undergraduate	63.88	20	17.537
Graduate	64.28	111	11.987
Post Graduate	70.43	69	10.009
Professional Degree	71.25	50	10.403
Total	67.34	250	12.102

The mean scores indicate varying levels of awareness of ESG (Environmental, Social, and Governance) disclosure across different qualification levels. Individuals with a Professional Degree exhibit the highest mean awareness score (71.25), closely followed by Post Graduates (70.43), suggesting that higher educational qualifications are associated with greater awareness of ESG disclosure. Graduates have a moderate awareness level (64.28), while Undergraduates display the lowest mean score (63.88), along with the highest standard deviation (17.537), indicating a wider variation in awareness within this group. Overall, the trend suggests a positive correlation between higher qualifications and increased ESG awareness.



Null Hypothesis H_{01B}: There is no significant difference in Awareness of Sustainable Practices according to the qualification of the Investors .

Alternate Hypothesis H_{11B}: There is a significant difference in Awareness of Sustainable Practices according to the qualification of the Investors.

To test the above null hypothesis, ANOVA and F-test is applied and results are as follows:

ANOVA					
Awareness of Sustainable Practices of Automobile sector					
	Sum of Squares	df	Mean Square	F	P-value
Between Groups	4233.291	3	1411.097	4.950	.002
Within Groups	70131.234	246	285.086		
Total	74364.525	249			

Interpretation: The above results indicate that calculated p-value is 0.002. It is less than 0.05. Therefore ANOVA and F-test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

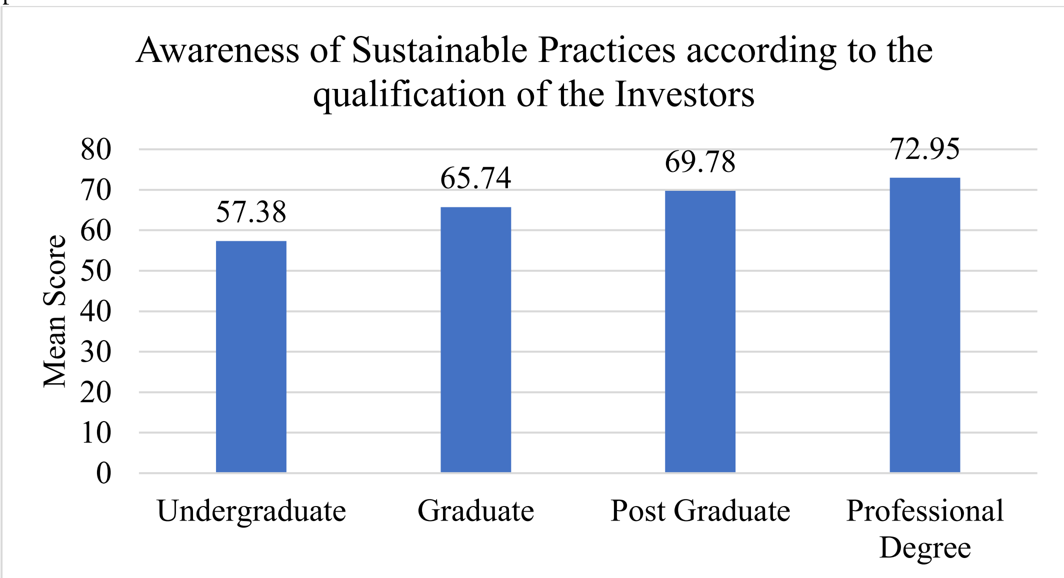
Conclusion: There is a significant difference in Awareness of Sustainable Practices according to the qualification of the Investors.

Findings: To understand the findings, mean scores are obtained and presented as follows:

Report			
Awareness of Sustainable Practices of Automobile sector			
Qualification	Mean	N	Std. Deviation

Undergraduate	57.38	20	18.036
Graduate	65.74	111	19.199
Post Graduate	69.78	69	16.018
Professional Degree	72.95	50	11.027
Total	67.63	250	17.282

The mean scores for awareness of sustainable practices in the automobile sector show a clear upward trend with increasing qualification levels. Respondents holding a Professional Degree have the highest mean score (72.95), indicating strong awareness, followed by Post Graduates (69.78), and Graduates (65.74). Undergraduates report the lowest mean awareness (57.38), coupled with a relatively high standard deviation (18.036), suggesting greater variability in their responses. This pattern reflects that higher educational attainment is associated with greater and more consistent awareness of sustainable practices within the automobile sector.



Objective-2: To study the relationship between knowledge of ESG disclosure and sustainable practices on investment Decision.

Null Hypothesis H_{02A}: There is no relationship between knowledge of ESG disclosure investment Decision.

Alternate Hypothesis H_{12A}: There is a relationship between knowledge of ESG disclosure investment Decision.

To test the above null hypothesis, Pearson Correlation test is applied and results are as follows:

Correlations			
		Impact of ESG score on investment decision	Awareness of ESG Disclosure
Impact of ESG score on investment decision	Pearson Correlation	1	.162*
	P-value		.011
	N	250	250
Awareness of ESG Disclosure	Pearson Correlation	.162*	1
	P-value	.011	
	N	250	250
*. Correlation is significant at the 0.05 level (2-tailed).			

Interpretation: The above results indicate that calculated p-value is 0.011. It is less than 0.05. Therefore Pearson Correlation test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.

Conclusion: There is a relationship between knowledge of ESG disclosure investment Decision.

Findings: The Pearson correlation coefficient between Impact of ESG score on investment decision and Awareness of ESG Disclosure is 0.162, with a p-value of 0.011, based on a sample size of 250. This indicates a weak but statistically significant positive correlation at the 0.05 level. In simple terms, as awareness of ESG disclosure increases, the perceived impact of ESG scores on investment decisions tends to increase slightly. Although the relationship is not strong, it is meaningful enough to suggest that greater ESG awareness may influence investor behavior.

Null Hypothesis H_{02B}: There is relationship between sustainable practices on investment Decision.
Alternate Hypothesis H_{12B}: There is a relationship between sustainable practices on investment Decision.
To test the above null hypothesis, Pearson Correlation test is applied and results are as follows:

Correlations			
		Impact of ESG score on investment decision	Awareness of Sustainable Practices of Automobile sector
Impact of ESG score on investment decision	Pearson Correlation	1	.298**
	P-value		.000
	N	250	250
Awareness of Sustainable Practices of Automobile sector	Pearson Correlation	.298**	1
	P-value	.000	
	N	250	250
**. Correlation is significant at the 0.01 level (2-tailed).			

Interpretation: The above results indicate that calculated p-value is 0.000. It is less than 0.05. Therefore Pearson Correlation test is rejected. Hence Null hypothesis is rejected and Alternate hypothesis is accepted.
Conclusion: There is a relationship between sustainable practices on investment Decision.
Findings: The Pearson correlation coefficient between Impact of ESG score on investment decision and Awareness of Sustainable Practices of the Automobile Sector is 0.298, with a p-value of 0.000, based on a sample size of 250. This indicates a moderate and statistically significant positive correlation. In practical terms, individuals who are more aware of sustainable practices in the automobile sector are more likely to consider ESG scores when making investment decisions. The highly significant p-value suggests this relationship is unlikely to be due to chance.
Linear Regression:
Dependent Variable: Impact of ESG score on investment decision
Independent Variable: Awareness of Sustainable Practices of Automobile sector, Awareness of ESG Disclosure

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.314[a]	.098	.091	17.194
a. Predictors: (Constant), Awareness of Sustainable Practices of Automobile sector, Awareness of ESG Disclosure				

The R Square value of 0.098 in the model summary indicates that approximately 9.8% of the variance in the Impact of ESG score on investment decision can be explained by the two independent variables: Awareness of Sustainable Practices of the Automobile Sector and Awareness of ESG Disclosure. This suggests that while the model does show a statistically significant relationship, the explanatory power is relatively low, meaning that other factors not included in the model may also play a significant role in influencing investment decisions related to ESG scores. The Adjusted R Square of 0.091 accounts for the number of predictors and confirms a similar explanatory strength.

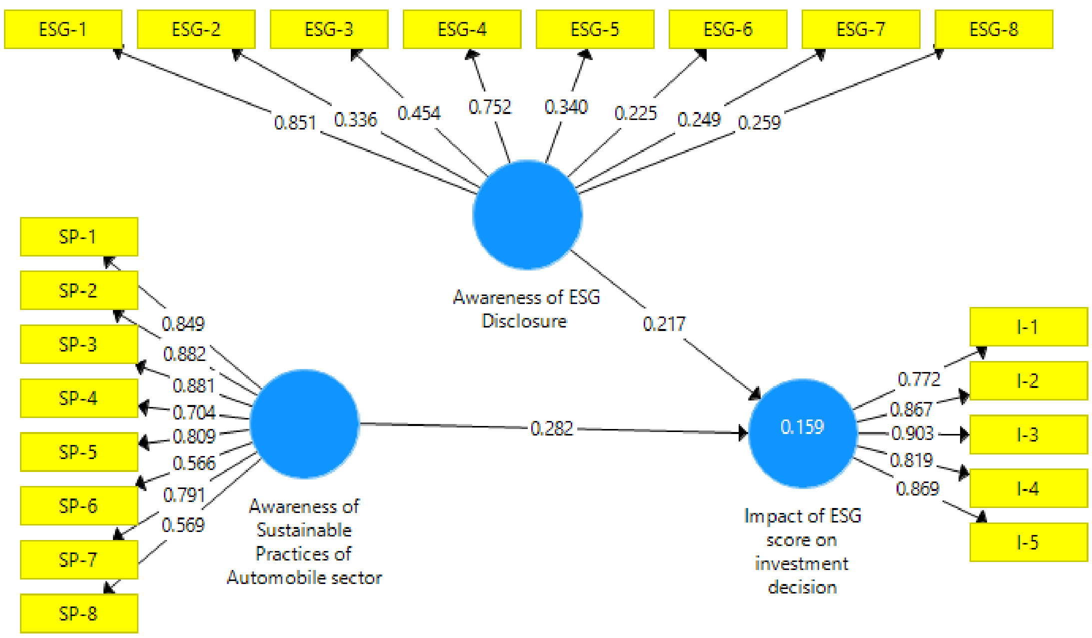
ANOVA[a]					
Model	Sum of Squares	df	Mean Square	F	P-value

1	Regression	7965.989	2	3982.994	13.473	.000[b]
	Residual	73019.675	247	295.626		
	Total	80985.664	249			
a. Dependent Variable: Impact of ESG score on investment decision						
b. Predictors: (Constant), Awareness of Sustainable Practices of Automobile sector, Awareness of ESG Disclosure						

Above results indicates that p-value is 0.000. It is less than 0.05. It indicates that linear regression model is good to fit.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	P-value
		B	Std. Error	Beta		
1	(Constant)	31.107	6.854		4.539	.000
	Awareness of ESG Disclosure	.150	.092	.101	1.630	.104
	Awareness of Sustainable Practices of Automobile sector	.288	.065	.276	4.450	.000
a. Dependent Variable: Impact of ESG score on investment decision						

Above table indicate the values of coefficients and corresponding significance. According to p-value of the Impact of ESG score factors it is observed that except "Awareness of ESG Disclosure" and "Awareness of Sustainable Practices" all remaining variables has significant impact on ESG score factors.
The mathematical equation to estimate the ESG score factors is presented as follows:
I= 31.107 + 0.150*ESG + 0.288*SP
Structural Equation Modelling:
Dependent Variable: Impact of ESG score on investment decision
Independent Variable: Awareness of Sustainable Practices of Automobile sector, Awareness of ESG Disclosure



Path Coefficients:

	Impact of ESG score on

	investment decision
Awareness of ESG Disclosure	0.217
Awareness of Sustainable Practices of Automobile sector	0.282

The path coefficients indicate the strength and direction of relationships between independent and dependent constructs in the model. Here, Awareness of ESG Disclosure has a path coefficient of 0.217, while Awareness of Sustainable Practices of the Automobile Sector has a higher coefficient of 0.282, both positively influencing the Impact of ESG score on investment decision. This suggests that both variables have a meaningful and positive influence on investment decisions, with awareness of sustainable practices having a slightly stronger impact.

Outer Loadings:

	Awareness of ESG Disclosure	Awareness of Sustainable Practices of Automobile sector	Impact of ESG score on investment decision
ESG-1	0.851		
ESG-2	0.336		
ESG-3	0.454		
ESG-4	0.752		
ESG-5	0.340		
ESG-6	0.225		
ESG-7	0.249		
ESG-8	0.259		
I-1			0.772
I-2			0.867
I-3			0.903
I-4			0.819
I-5			0.869
SP-1		0.849	
SP-2		0.882	
SP-3		0.881	
SP-4		0.704	
SP-5		0.809	
SP-6		0.566	
SP-7		0.791	
SP-8		0.569	

Outer loadings represent how well each observed variable (indicator) reflects its underlying latent construct. High loadings (above 0.70) indicate strong contribution. For Impact of ESG score on investment decision, all items (I-1 to I-5) show very strong loadings (ranging from 0.772 to 0.903), indicating excellent measurement reliability. For Awareness of Sustainable Practices, most items (SP-1 to SP-8) load well, particularly SP-2 (0.882) and SP-3 (0.881), though SP-6 and SP-8 are relatively weaker. For Awareness of ESG Disclosure, ESG-1 (0.851) and ESG-4 (0.752) show strong loadings, while the remaining indicators (ESG-2 to ESG-8) have low loadings, suggesting some items may not effectively measure the construct.

Outer Weights:

	Awareness of ESG Disclosure	Awareness of Sustainable Practices of	Impact of ESG score on

		Automobile sector	investment decision
ESG-1	0.592		
ESG-2	0.133		
ESG-3	0.133		
ESG-4	0.427		
ESG-5	0.130		
ESG-6	0.040		
ESG-7	0.014		
ESG-8	0.052		
I-1			0.182
I-2			0.249
I-3			0.258
I-4			0.231
I-5			0.256
SP-1		0.195	
SP-2		0.217	
SP-3		0.230	
SP-4		0.120	
SP-5		0.209	
SP-6		0.026	
SP-7		0.163	
SP-8		0.074	

Outer weights reflect the relative importance of each indicator in forming its latent variable in formative measurement models. Among Awareness of ESG Disclosure indicators, ESG-1 (0.592) and ESG-4 (0.427) are the most influential. For Awareness of Sustainable Practices, SP-3 (0.230), SP-2 (0.217), and SP-5 (0.209) are relatively stronger contributors. In Impact of ESG score on investment decision, I-3 (0.258) and I-5 (0.256) carry more weight, indicating their higher influence on the overall construct. Items with lower weights contribute less and may be considered for refinement or removal depending on the measurement approach.

CONCLUSION:

The study concludes that investor awareness of ESG (Environmental, Social, and Governance) disclosure and sustainable practices in the automobile sector significantly influences investment decisions. Demographic analysis shows a predominantly male, well-educated, and middle-aged sample. Reliability testing confirms that the measurement scales are robust. ANOVA results highlight significant differences in ESG awareness and sustainable practice awareness across different qualification levels. Correlation analysis reveals statistically significant positive relationships between both ESG disclosure and sustainable practices with investment decisions, with sustainable practices showing a stronger influence. Linear regression and structural equation modeling further confirm that both independent variables positively impact ESG-based investment decisions, though the overall explained variance is modest. The findings emphasize the growing relevance of ESG knowledge in shaping investment behavior and suggest that enhancing awareness—especially of sustainable practices—can promote more informed and responsible investment decisions.

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