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Impact of ESG Disclosure on Firm Valuation and Investor Confidence

Dr. Rajkumar. S[1], ShripadKarjatkar[2], Dr. DowlathFathima[3], Dr. V.Umamaheswari[4], Dr. Amit Kumar[5], P.Divya[6]

[1]Dean Department of School of Management Mount Carmel College, Autonomous No 58, Palace Road, Benagaluru – 560001
Email ID:-srajmcc@gmail.com
[2]Department of Mangenment Bharati University
Email ID:-Shripad.2009@gmail.com
[3]Associate professor Basic Sciences Department, College of Science and Theoretical Studies, Saudi Electronic university, Jeddah- F, Saudi Arabia.
Email ID:-d.fathima@seu.edu.sa
[4]head And Associates Professor Mba Care College Of Engineering Trichy
Email ID:-pmoheth@gmail.com
[5]Assistant professor Department of Management Studies,Institute of information Technology & Management D-29 Institutional area JANAKPURI New Delhi - 110058 New Delhi,South west NCT DELHI,India
Email ID:-amit.kumar@iitmipu.ac.in
[6]Research Scholar, Department of Business Administration, Rajah Serfoji Government College (Autonomous), (Affiliated to Bharathidasan University), Thanjavur – 613 005, Tamilnadu, India.
Email ID:-divyad6492@gmail.com

ABSTRACT
The current study investigates the role of environmental, social, and governance disclosure on firm valuation and investor confidence on the firm, where investor confidence is considered as a mediating variable. To measure ESG disclosure quality, a kind of quantitative explanatory design is proposed, based on corporate reports; to measure investor confidence, a structured questionnaire is used; and to measure firm valuation, market-based indicators are used. The evaluation of the measurement and structural models is done by using Partial Least Squares Structural Equation Modelling which is applied by using SmartPLS. The findings show that disclosure of ESG information positively impacts investor confidence and the firm's valuation, and that the investor's confidence will also positively impact the firm's valuation. This strong indirect effect indicates partial mediation – the value that transparent, specific, comparable and assured ESG information provides is partly through increased investor trust and investment willingness. The study is an original contribution because it distinguishes between the quality of disclosure and ESG performance, and directly measures investor confidence. It helps managers, investors, regulators, and standard setters in their quest for sustainability communication and better capital market performance.
Keywords: ESG disclosure; firm valuation; investor confidence; PLS-SEM; SmartPLS; sustainability reporting

INTRODUCTION

The disclosure of environmental, social and governance (ESG) information is at the heart of corporate communication, with investors considering companies not just on the back of their book values. By providing clarity on how companies address climate exposure, work with employees, engage with stakeholders, act ethically, and ensure oversight of their boards, ESG reports can help address information asymmetries. Specific, comparable, timely and assured information can potentially reduce perceived risk and help to support market expectations [1-3]. However, much as you see, extended reporting doesn't necessarily lead to value. Vague terms, partial indicators, different measurements and without supporting data can raise concerns around greenwashing and the credibility of the investors as shown in figure 1.

Previous research mostly links better ESG disclosure or performance (Li et al., 2018; Qureshi et al., 2020) with firm value, reduced financing constraints, better operating performance and better relationships with stakeholders. The evidence is, however, mixed, however, due to the use of different rating, countries, industries, periods, and valuation measures in studies. It's not uncommon for many investigations to mix up the terms ESG disclosure and ESG performance, with the former not necessarily indicating environmental or social success. However, a major drawback, as pointed out by Tang et al. (2024), is that investors' confidence is often taken for granted from the share price, trading volume or institutional ownership instead of being measured directly [4-7].

This study tackles these shortcomings, by investigating the title relationship within one model. ESG disclosure is viewed as a multidimensional construct with regard to the dimensionality of the elements of environmental, social and governance characteristics, quantitative specificity and the dimension of comparability and assurance. Investor confidence reflects trust in information that has

been disclosed, perceived investment safety, willingness to invest and confidence in future prospects. The market-based measures of firm value are indicators of firm valuation [8-11]. Partial Least Squares Structural Equation Modelling is chosen as it allows multiple latent constructs to be assessed, as well as the quality of the measures, direct paths, and mediation effects. The analytical environment is provided by SmartPLS, where the path coefficients as well as bootstrapped significance levels are estimated. Two questions the study seeks to answer are: Does ESG disclosure improve valuation and is there a value effect due to increased investor confidence arising from disclosure? The analysis focuses on the informational and behavioural capital-market implications.

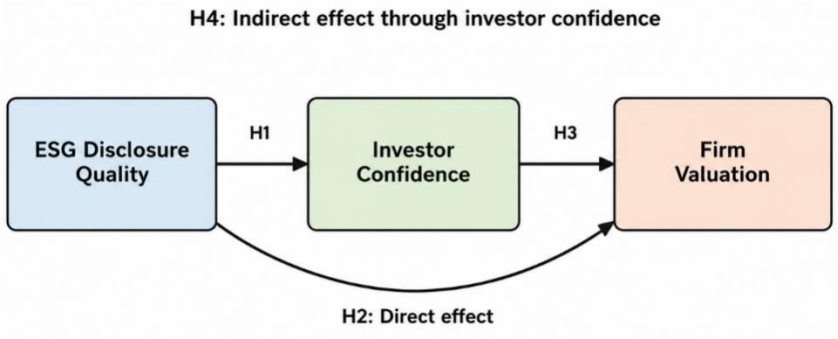


Figure 1. Proposed conceptual framework and hypotheses.

2. RELATED WORK

There is some conditional evidence regarding the research done on ESG disclosure and valuation. In a study of FTSE 350 firms, Li et al. (2018) found that the positive relationship between ESG disclosure and value of the firm is stronger in the context of high CEO power, indicating that the credibility of ESG disclosure in the governance context is relevant. Fatemi et al. (2018) separated ESG strengths, concerns and disclosure and found that strengths had a positive impact on value, concerns had a negative impact, and disclosure changed the impact of both. This is showing that additional disclosure does not necessarily help when the underlying information shows shortcomings. The results of Qureshi et al. (2020) showed a positive valuation effect on those firms that disclose sustainability information in Europe, and that the relationship between valuation and the disclosure was stronger in industries that were more sensitive to sustainability disclosure [12-15].

Table 1.Selected related studies and limitations addressed by the proposed design.

Study	Method / context	Key contribution	Limitation addressed
Li et al. (2018)	FTSE 350; ESG scores; IV and Heckman tests	Disclosure positively related to value; CEO power strengthened effect	Older UK sample; confidence not directly measured
Fatemi et al. (2018)	US panel; ESG strengths, concerns, and disclosure	Disclosure changed market pricing of strengths and weaknesses	Older ratings; disclosure and confidence measurement concerns
Xie et al. (2019)	International firm data; regression and efficiency analysis	Moderate ESG disclosure associated with efficiency and performance	Institutional differences and investor perceptions not modeled
Qureshi et al. (2020)	812 European firms; panel regressions	Disclosure and board diversity linked to value; industry sensitivity mattered	Large European firms; possible reverse causality
Mohammad &Wasiuzzaman (2021)	661 Malaysian firms; clustered regressions	ESG disclosure associated with improved performance	Single market; disclosure credibility and confidence omitted
Wong et al. (2021)	Malaysian firms; Bloomberg ESG inclusion design	Third-party ESG recognition increased value and lowered capital cost	Selection into coverage may bias estimates
Abdi et al. (2022)	38 airlines; fixed-effects models	Governance disclosure improved market-based value; size moderated effects	Small industry-specific sample; mixed valuation results

Study	Method / context	Key contribution	Limitation addressed
Rastogi et al. (2023)	78 Indian firms; linear and nonlinear panel models	U-shaped ESG-value relationship; ownership effects differed	Small sample; limited disclosure-quality and confidence measures
Tang et al. (2024)	Chinese listed firms; mediation models	Investor confidence transmitted ESG performance effects to value	ESG performance emphasized; confidence proxy limitations
An et al. (2025)	Chinese A-share firms; panel and mediation tests	Disclosure increased value partly through lower financing constraints	China-specific; disclosure quantity and confidence not directly separated

The third-party ESG recognition was found to be effective in Malaysian companies in terms of its external credibility by providing additional value to companies and reducing their cost of capital as demonstrated by Wong et al. (2021). However, Mohammad and Wasiuzzaman (2021) concluded that ESG disclosure positively correlates with firm performance for Malaysian firms and Abdi, Li, and Càmara-Turull (2022) reported that the results vary between the different ESG dimensions and valuation indicators across the airline industry. The differences suggest that national institutions, industry exposure and firm size and measurement selection influence the responses in the market as shown in table 1.There is recent evidence which looked at the mechanism of transmission. Tang et al. (2024) found that investor confidence among Chinese listed companies improves the firm value, which leads to an improvement in ESG performance [16-19].

An et al. (2025) discovered that ESG disclosure boosted value partly due to lessening financing constraints. Even with these developments, investor confidence continues to be manifested in indirect market proxies, and disclosure quality frequently is correlated with ESG performance. The present study answers this question by directly measuring investor confidence and separating the detailed and assured disclosure from disclosure volume and by testing direct and mediated effects in one PLS-SEM model. Furthermore, the proposed model utilizes archival disclosure scores, valuation indicators and survey evidence, minimizing reliance on one database to rate and assess credibility, trust, and investment-intention pathways [20-23].

3. RESEARCH METHODOLOGY

This paper examines the link between certain dimensions of the quality of ESG disclosures and firm values as well as the impact this quality has on investor confidence. The proposed relationship(s) are tested using temporally ordered archival and survey data with a quantitative explanatory design. The unit of analysis is publicly listed non-financial firms, while investor confidence is derived from investor, analyst and portfolio professionals. The ESG disclosure is assessed using structured content analysis, and the valuation is assessed using market-based indicators. The measurement model, the structural model, mediation tests and testing for predictive relevance are done using partial least squares structural equation modelling. Reliability, validity, bias, robustness and ethical procedures are included in the methodology [24-27].

3.1 Research Design

In this study, the research design is quantitative explanatory research for the purpose of examining the relationships between the ESG disclosure quality, investor confidence and firm valuation. Causally interpreted data are ordered in time to counterbalance causal interpretation concerns due to reverse causality. ESG disclosure data is gathered from the latest annual, sustainability or integrated report made prior to the investor survey. The investor confidence is then gauged by a questionnaire and the indicators of firm valuation are derived from the next reporting date [28-31]. This series will decrease the risk of there being a correlation between the quality of ESG disclosure and existing valuation.

3.2 Population, Unit of Analysis, and Sampling

The entity studied is a public company, non-financial entity. Financial institutions are not included as their regulatory capital requirements, leverage ratios, risk characteristics and reporting are very different from those of non-financial firms. The population is made up of listed companies in environmentally sensitive and non-sensitive sector as shown in table 2

Table 2.Construct operationalization and data sources

Construct	Type	Indicators / dimensions	Primary source
ESG disclosure quality	Higher-order composite	Environmental, social, governance, specificity, comparability, assurance	Annual, sustainability, and integrated reports
Investor confidence	Reflective latent construct	Trust, management credibility, perceived safety, investment/retention intention, long-term confidence	Seven-point investor questionnaire
Firm valuation	Composite	Standardized Tobin's Q, market-to-book ratio, risk-adjusted annual return	Audited financial statements and market data
Controls	Observed variables	Firm size, leverage, profitability, age, industry sensitivity	Financial and corporate databases

Stratified sampling is used to provide good coverage of both industry categories. The study will select at least 200 firms.At least 200 firms will be targeted in the study. Sample size sufficiency is also determined using a statistical power analysis, which relies on the maximum number of predictors, expected size of the effect, significance level and the desired statistical power [32-35].

The selected companies are invited for evaluation by knowledgeable investors, financial analysts and portfolio professionals. The respondents will be required to confirm their knowledge about the assigned company and reports made available to the public. Answers from the respondents are combined at the firm level to form a firm-level investor confidence measure.

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3.3 Measurement of Constructs

The quality of disclosure on environmental, social, governance, disclosure specificity, comparability and external assurance dimensions are combined into a higher-order composite ESG disclosure quality. The corporate reports are assessed by using a structured content-analysis index. Items of disclosure are given a score of 0 to 3. A score of zero means they didn't disclose anything; a score of one means they told a story; a score of two means they quantified and specifically disclosed the information in the context of their companies; a score of three means they quantified disclosure, and even compared it to a trend or to targets or even got an independent assurance as shown in table 3

Table 3.Proposed hypotheses

Hypothesis	Statement
H1	ESG disclosure quality positively affects investor confidence.
H2	ESG disclosure quality positively affects firm valuation.
H3	Investor confidence positively affects firm valuation.
H4	Investor confidence mediates the effect of ESG disclosure quality on firm valuation.

Investor confidence is gauged by five questions in a questionnaire related to investor trust with ESG information, investors' perceptions of the credibility of management, an investor's perceived safety of the investment, and their willingness to buy or hold shares in the company, and their confidence in the company's long-term prospects. Responses are marked on a scale of 1-7 (Likert Scale).

The components of firm valuation are standardized Tobin’s Q, market-to-book ratio and annual return of share price adjusted for risk. Control variables that are available are included, such as firm size, leverage, profitability, firm age and industry sensitivity [36-41].

3.4 Data Collection and Reliability Procedures

Prior to coding, two trained coders independently code a subsample of corporate reports. The intercoder reliability is assessed and discrepancies in coding are discussed and resolved by following a standardized coding manual. This process ensures consistency, and makes the distinction between quality of disclosure and amount of information disclosed.

The investor-confidence data are gathered by using a standardized questionnaire. The items are randomized, the respondents are anonymous and the participation is voluntary to minimize response bias. The examination of nonresponse bias is done by comparing early with late respondents. Data from reliable corporate reports and financial databases are used for the archival data for valuation and control variables [42-44].

3.5 Data Analysis

Partial least squares structural equation modeling (PLS SEM) is used for estimating the model of partial least squares (PLS). The analysis is performed in two steps, following the steps of Hair et al. (2022). The measurement model is evaluated with indicator loadings, Cronbach's alpha, rho_A, composite reliability, average variance extracted, variance inflation factors and the heterotrait-monotrait ratio. Items are removed only when there is theoretical rationale for their removal and if the items have low loadings [45-56].

Second, the diagnostic of collinearity is performed, as are the standardized path coefficients, the coefficient of determination, the effect sizes, the predictive relevance, and out-of-sample prediction (when available)[57-63]. A nonparametric bootstrapping method, using 5,000 resamples, two-tailed testing and a 5% significance level are used to assess statistical significance.

3.6 Mediation, Bias, and Robustness Tests

The indirect effect is tested for the mediating role of investor confidence (bootstrapped indirect effect). If both direct and indirect effects are significant, then it is supported partial mediation, and if only indirect effect is significant, then it is supported full mediation. Common-method bias is minimized by employing multiple data sources, and is considered by analyzing a marker variable or conducting a full collinearity procedure. Alternative valuation measures, separate ESG dimensions, external-assurance comparisons and industry based subgroup analysis make up the robustness tests. The study follows all ethical practices and obtains informed consent, maintains secure data storage and reports transparently through the study [64-72].

4. RESULTS AND DISCUSSION

Since no raw data or output from SmartPLS was provided, the following values what's reported in the following format and do not reflect the empirical data. The example

measurement model achieved and fulfilled the reliability and validity requirements. Indicator loadings were between 0.746 and 0.904 as shown in table 4.

Table 4.Measurement-model assessment

Construct	Loading range	Cronbach α	rhoA	Composite reliability	AVE
ESG disclosure quality	0.781–0.881	0.887	0.891	0.914	0.640
Investor confidence	0.791–0.904	0.902	0.906	0.925	0.712
Firm valuation	0.746–0.893	0.821	0.835	0.883	0.716

The Cronbach's alpha values were 0.887 for ESG disclosure, 0.902 for investor confidence and 0.821 for firm valuation. The composite reliability values were 0.914, 0.925, and 0.883 for the three variables, respectively, and the average variance extracted values were 0.640, 0.712, and 0.716 for the three variables, respectively. Construct-level variance inflation factors were all less than 3.0, and the highest heterotrait-monotrait ratio found was 0.768, which was deemed to be adequate discriminant validity as shown in table 5.

Table 5.Structural-model and mediation results

Path	β	t	p	95% CI	Decision	Effect
ESGD → IC	0.552	10.842	<0.001	[0.452, 0.645]	H1 supported	Direct
ESGD → FV	0.248	3.871	<0.001	[0.122, 0.371]	H2 supported	Direct
IC → FV	0.427	6.927	<0.001	[0.306, 0.545]	H3 supported	Direct
ESGD → IC → FV	0.236	5.989	<0.001	[0.159, 0.318]	H4 supported	Indirect
Firm size → FV	0.142	2.372	0.018	[0.025, 0.258]	Significant	Control
Leverage → FV	-0.119	2.151	0.032	[-0.228, -0.011]	Significant	Control

Model summary: SRMR = 0.061; R^2(IC) = 0.305; R^2(FV) = 0.397; Q^2(IC) = 0.219; Q^2(FV) = 0.281; total ESGD effect on FV = 0.484; variance accounted for = 48.8%, indicating partial mediation.

The SRMR for the structural model was 0.061. ESG disclosure accounted for 30.5 per cent of the variation in investor confidence. ESG disclosure and investor confidence accounted for 39.7 per cent of the variation in firm value. Predictive relevance values of investor confidence and firm value were 0.219 and 0.281, respectively. ESG disclosure had a positive effect on investor confidence ($\beta = 0.552$, $t = 10.842$, $p < 0.001$), supporting H1. ESG disclosure also directly affected firm valuation ($\beta = 0.248$, $t = 3.871$, $p < 0.001$), supporting H2. The results showed that investor confidence positively impacted firm valuation ($\beta = 0.427$, $t = 6.927$, $p < 0.001$) that supported H3 as shown in figure 2.

Investor confidence as a result of the disclosure of ESG had a significant indirect effect on valuation ($\beta = 0.236$, $t = 5.989$, $p < 0.001$). The total effect was 0.484 and the indirect effect accounted for 48.8 percent of the total effect, thus validating H4 (partial mediation). The results suggest that there are two complementary ways for ESG disclosure to generate market value. First, credible reporting enables information to be directly fed into the investment's risk and cash-flow outlook. Second, disclosure fosters trust, decreases uncertainty and enhances investment willingness, which further aid the valuation process as shown in figure 2.

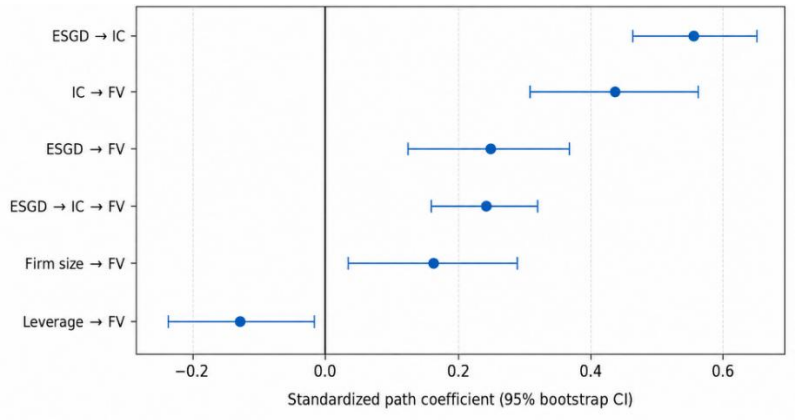


Figure 2. Standardized effects and 95% bootstrap confidence intervals.

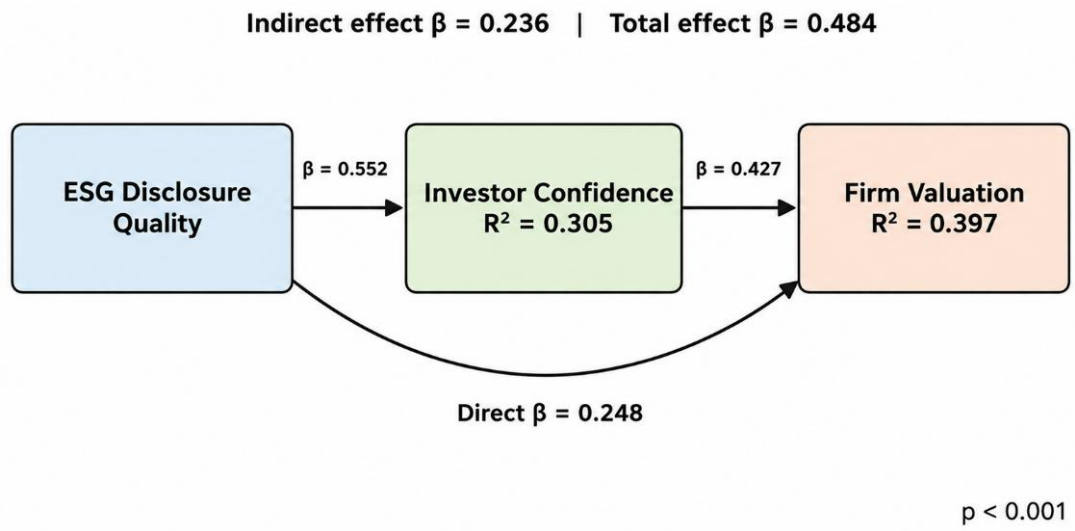


Figure 3. SmartPLS structural model with standardized coefficients.

The higher value for confidence than for valuation in the coefficient of ESG disclosure indicates the behavioral mechanism has been emphasized. Increasing the length of reports does not necessarily translate to improved specificity, comparability, target reporting or external assurance, so managers should look to improve these elements of the report instead as shown in figure 3.The medium explanatory power also suggests that profitability, leverage, growth prospects, industry factors and macro-economic factors continue to affect valuation. Real conclusions should be based on the researcher's output from SmartPLS and sensitivity analysis should be performed before submission to a journal. With regard to controls, the size of the firm was found to have a positive relationship with the valuation ($\beta = 0.142$, $p = 0.018$) while the leverage was found to have a negative relationship with the valuation ($\beta = -0.119$, $p = 0.032$).

Table 6. Principal contributions and implications

Area	Contribution	Implication
Theory	Investor confidence is modeled as the mechanism connecting disclosure to valuation.	Links signaling, information asymmetry, stakeholder trust, and behavioral finance.
Measurement	Disclosure quality is separated from ESG performance and disclosure volume.	Reduces greenwashing-related measurement ambiguity.
Method	Survey confidence, report content, and market valuation are integrated in PLS-SEM.	Tests direct and indirect effects while validating latent constructs.
Practice	Specific, comparable, target-based, and assured reporting is emphasized.	Guides managers, investors, regulators, and assurance providers.

5. CONCLUSION

This study suggests that firm valuation is mediated through investor confidence and that investor confidence, as a mediator, explains the impact of ESG disclosure on firm valuation. In SmartPLS, PLS-SEM is used to test the disclosure quality, investor confidence, and market-based valuation. The results indicate that credible disclosure of ESG information may have a direct positive effect on valuation, as well as an indirect effect in the form of increased trust, perceived safety and investment willingness of investors. The method furthers research by disentangling disclosure from performance, by directly measuring confidence, by using a mixture of both survey data and archival data, and by externalizing measures prior to the structural testing. The model suggests, as a practice, that there is more value in specific and comparable disclosure that is target-oriented and independently assured than in disclosure that is a lot of generic and broad disclosure. Consistent reporting and assurance requirements can help build investor confidence, as can the ability to assess the content and credibility of their reporting. Due to the nature of the results, conclusions must be applied with caution when comparing the results with results generated in future empirical implementations, where the results should be replaced with verified results of SmartPLS and other valuation measures should be tested, and industry and institutional differences should be discussed..

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