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## The Impact of Environmental, Social and Governance Performance on the Quality of Financial Reporting Emphasis on Product Market Competition

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### Abstract


Environmental, social and governance performance, as one of the key axes of Corporate Social Responsibility (CSR), plays an important role in improving the transparency and quality of financial reporting. However, product market competition may affect the sustainability performance of companies. The aim of this study is to investigate the effect of environmental, social and governance performance on the quality of financial reporting, emphasizing the moderating role of managerial myopia in companies listed on the Tehran Stock Exchange. The research data includes financial and non-financial information of 120 companies in the period 2019-2024, which were analyzed using the mixed data method and Eviews software. The results show that higher environmental, social and governance performance is significantly associated with improved financial reporting quality. Thus, improved sustainability reporting improves the quality of accounting reports. Furthermore, the results showed that increased product market competition weakens the positive relationship between Environmental, Social, and Governance (ESG) performance and financial reporting quality. These findings are consistent with agency and legitimacy theories and highlight the importance of simultaneously addressing sustainable development and improving managerial behaviors. The limitations of Iran's institutional environment, including weak corporate governance and economic volatility, may limit the generalizability of the results. This study emphasizes that to improve the quality of financial reporting, companies should pay attention to issues related to product market competition in addition to increasing ESG performance.

**Keywords:** Financial reporting quality, Environmental and social performance, Product market competitiveness.

## 1 | Introduction

The role of disclosing Environmental, Social, and Governance (ESG) factors in shaping investment efficiency has attracted increasing attention in recent years. As global investors become more aware of the long-term

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impacts of corporate sustainability practices, integrating ESG factors into investment decision-making has emerged as a key area of focus. ESG disclosures provide valuable insights into a firm's commitment to environmental stewardship, social responsibility, and governance practices, thereby enhancing transparency and accountability [1]. Investors and other stakeholders are increasingly demanding comprehensive ESG disclosures to assess corporate sustainability and ethical impact, which in turn can influence investment decisions and strategic planning.

Simultaneously, financial reporting quality—commonly referred to as the quality of financial reporting—plays a fundamental role in ensuring that financial information is accurate, reliable, and useful for stakeholders. High-quality financial reporting ensures that financial statements faithfully represent a firm's economic activities and financial position, free from material misstatements or bias, and provide meaningful information for decision-making by investors, creditors, and other stakeholders [2]. It enhances transparency and trust, reduces information asymmetry, and ultimately contributes to more efficient capital markets [3]. When financial reporting is of high quality, it offers a clearer depiction of a firm's performance and risks, which is critical for investors in making informed decisions.

In today's dynamic business environment, financial reporting quality serves as a cornerstone of trust for investors and stakeholders, playing a critical role in assessing an organization's health and performance. High-quality financial reporting ensures transparency, accuracy, and reliability of financial information, providing a solid foundation for sound economic decision-making. In parallel, the emerging and increasingly prominent concept of ESG performance has gained substantial attention from researchers and market practitioners. These three dimensions go beyond mere profitability objectives, addressing corporate accountability toward society and the environment, as well as the ethical and managerial principles governing organizations. Understanding how these modern approaches intersect with traditional financial reporting quality metrics—particularly within a competitive context—is of paramount importance [4].

The relationship between ESG performance and financial reporting quality has been the focus of considerable research. Firms demonstrating a stronger commitment to ESG principles are expected to exhibit greater transparency in disclosing non-financial information. This, in turn, can enhance financial reporting quality by reducing information asymmetry, strengthening internal and external oversight, and improving risk management. For instance, pressures arising from environmental or social concerns may compel firms to provide more accurate and comprehensive reports on their operational impacts, which subsequently affects the quality of information presented in financial statements [5]. Moreover, product market competition represents a key factor influencing how firms respond to ESG pressures and approach financial reporting. In highly competitive markets, the appeal for investment and the trust of customers and shareholders become particularly critical. Firms may focus on enhancing their ESG performance and communicate these achievements through transparent financial reporting to gain a competitive advantage. Such an approach can serve as a strategic tool to differentiate from competitors, attract sustainable capital, and maintain long-term market share, all of which indirectly influence financial reporting quality.

## 2 | Literature Review and Research Hypotheses

In recent decades, corporate sustainability and the extent of firms' commitment to ESG standards have become among the most important indicators for evaluating firm performance. Investors, policymakers, and other stakeholders increasingly demand information that not only reflects financial outcomes but also demonstrates a firm's social and environmental responsibility. At the same time, financial reporting quality, as a fundamental pillar of economic decision-making, plays a critical role in the optimal allocation of resources [1]. Reliable and transparent financial information enhances the efficiency of financial markets and strengthens investor confidence [2]. However, in many cases, managers manipulate financial information due to pressures from shareholder expectations and short-term considerations, which can reduce financial reporting quality and increase market opacity [6]. Within this context, it remains unclear how ESG performance influences financial reporting quality and whether adherence to ESG principles can mitigate managerial opportunism.

One of the most significant factors that can negatively affect financial reporting quality is managerial myopia. Managerial myopia refers to a situation in which corporate managers prioritize short-term gains over long-term objectives when making decisions [7]. This behavior can lead to reduced investment in profitable long-term projects, increased earnings management, and the dissemination of misleading information to the market. Studies have shown that managerial myopia can diminish financial reporting quality and, in some cases, even precipitate financial crises [8]. Conversely, strong corporate governance can mitigate such behaviors by establishing effective oversight mechanisms. Nevertheless, it remains unclear whether ESG performance can serve as an effective factor in reducing managerial myopia and, consequently, enhancing financial reporting quality.

In recent years, numerous studies have examined the impact of ESG performance on corporate financial performance. Some research has indicated that firms with strong ESG performance also adhere to higher reporting standards and are less likely to engage in earnings management or manipulate financial information [9]. However, other studies suggest that certain firms use ESG metrics merely as a promotional tool, with no substantive improvements in financial reporting transparency [9]. These findings indicate that the relationship between ESG performance and financial reporting quality remains inconclusive and warrants further investigation.

Furthermore, ESG performance may have different effects in developed and emerging markets. In developed countries, stringent regulatory standards require firms to adhere to ESG principles, resulting in more transparent financial reporting. In contrast, in emerging markets such as Iran, oversight of ESG performance remains in its early stages, and specific standards in this area have not yet been fully established [10]. This situation may lead to the instrumental use of ESG practices and the preparation of non-substantive reports, which can, in turn, diminish financial reporting quality. Additionally, due to Iran's unique economic and regulatory structure, institutional pressures on managers may exacerbate managerial myopia and reduce the transparency of financial information. Therefore, examining this issue within Iran's economic and institutional context can provide a better understanding of the relationships among ESG performance, financial reporting quality, and managerial myopia.

Another key challenge in this area is examining the impact of the different dimensions of ESG performance on financial reporting quality. Some studies have indicated that the governance component (G) may exert the greatest influence on improving financial reporting quality, as it enhances oversight over managerial performance and reduces the likelihood of earnings management [11]. In contrast, other research has suggested that environmental and social performance can also indirectly affect financial transparency by enhancing the company's reputation and increasing stakeholder loyalty [10]. Nevertheless, it remains unclear which of these dimensions exerts the most significant impact on financial reporting quality, particularly in developing countries where ESG standards have not yet been fully implemented.

In the current business landscape, the relationship between ESG performance and financial reporting quality has increasingly been recognized as a key determinant of organizational value and credibility. Of particular importance is not only the relationship itself but also how it is moderated and shaped within different market contexts. One of the most critical contexts is the level of competition in the firms' product markets. While companies committed to sustainability tend to engage in more transparent reporting, a fundamental question arises: how does the intensity of competition in the markets in which these firms operate influence this dynamic? Examining the interactive role of product market competition provides a more comprehensive framework for understanding firms' motivation and capacity to disclose high-quality information, particularly with respect to ESG performance.

In highly competitive markets, firms face intensified pressures to achieve and maintain a competitive advantage. This competition manifests not only in product pricing and innovation but increasingly in institutional reliability and accountability. In such an environment, strong performance in ESG domains can serve as a critical strategic tool for brand differentiation, attracting environmentally and socially conscious customers, and appealing to long-term, responsible investors [12]. Firms operating in competitive markets are

thus more motivated to systematically collect, evaluate, and report data on their ESG performance to substantiate their claims and maintain the credibility and transparency necessary to earn stakeholder trust. This, in turn, directly contributes to the enhancement of financial reporting quality, particularly regarding the disclosure of non-financial information and its implications for financial performance.

Conversely, firms operating in markets with relatively low competition may face less pressure to enhance their ESG performance or reporting transparency. In such scenarios, companies may perceive less need to differentiate themselves through sustainability initiatives due to high entry barriers or strong customer loyalty [13]. Consequently, the incentive to invest in the accurate collection of ESG performance data and to improve financial reporting quality may not be strong. In some cases, firms with substantial market power may even prefer to limit disclosure to protect their competitive advantages, which can lead to a reduction in overall financial reporting quality and foster impression management rather than truthful disclosure.

The moderating role of market competition implies that the effects of ESG performance on financial reporting quality vary depending on the intensity of competition. For instance, in highly competitive markets, the positive relationship between ESG disclosure and financial reporting quality may be stronger, as firms leverage transparency as a strategic tool to build trust and gain competitive advantage. Conversely, in less competitive markets, this relationship may be weaker or, in some cases, even negative if firms strategically withhold information. This moderating effect of competition adds an additional layer of complexity to our understanding of how external factors influence corporate reporting incentives [14].

Therefore, to achieve a more precise assessment of the impact of ESG performance on financial reporting quality, it is essential to consider the structure of the product market in the analysis. Understanding how competitive pressures shape firms' incentives and opportunities for transparent ESG reporting is of critical importance for both researchers and practitioners. This comprehensive approach, which simultaneously accounts for the operational environment, market structure, and internal firm performance alongside reporting quality, can inform the development of more effective policies and provide practical guidance for enhancing both sustainability and transparency within the professional community.

Erdoğan et al. [15] examined the relationship between firms' engagement in ESG activities and corporate investment efficiency. Their findings indicate that overall participation in ESG activities is positively and significantly associated with investment efficiency. Scenario analyses of overinvestment and underinvestment reveal that ESG engagement primarily mitigates the problems of overinvestment. In underinvestment scenarios, ESG activities appear beneficial only for firms experiencing higher information asymmetry. Consequently, information asymmetry is a critical factor in understanding the effects of ESG engagement for underinvesting firms.

Fu and Li [16] examined the impact of ESG performance on corporate financial performance, with an emphasis on the moderating role of digital transformation. Regression analyses revealed that ESG performance has a positive and significant effect on corporate financial performance, and digital transformation enhances this effect. Furthermore, the study found that the positive impact of current ESG performance on financial performance gradually diminishes over lagged periods. Specifically, heterogeneity tests indicate that the enhancing effect of ESG performance on financial performance is significant for non-state-owned firms but negligible for state-owned firms. A similar pattern emerges for firms located in the eastern region compared to those in the western and central regions. Finally, the positive effect of ESG performance on financial performance is stronger for polluting firms than for non-polluting firms.

Falahi and Hedayati [17] investigated the impact of managerial short-termism on the social and environmental performance of Iranian companies. The study examined how managers, by focusing on short-term outcomes, may neglect Corporate Social Responsibility (CSR) and environmental policies. It further observed the negative long-term consequences of such short-termist behavior on organizational branding and reputation. The findings indicate that managerial short-termism can pose a significant barrier to implementing sustainable and responsible policies, highlighting the need for firms to adopt forward-looking decision-making practices to strengthen their ESG commitments.

Rezaei et al. [18] examined the relationship between environmental disclosure and Research and Development (R&D) expenditures, with a focus on the moderating role of board political connections. Their findings indicate that firms with greater attention to environmental disclosure are more likely to increase R&D spending aimed at developing new products with minimal environmental impact. However, in firms with stronger political connections, R&D expenditures tend to decrease, and political connections moderate the positive relationship between environmental disclosure and R&D investment.

Tahriri and Afsay [19] examined the impact of ESG disclosure on auditor effort and audit quality. Their findings indicate that the level of ESG disclosure is negatively associated with auditor effort. Additionally, a negative relationship was observed between ESG disclosure and audit quality, which is mediated by auditor effort. The results suggest that auditors increase their efforts to manage audit risk arising from lower levels of ESG disclosure.

Ashraf Talash et al. [20] examined the impact of environmental performance and CSR on market value, focusing on the mediating role of firm age. The results indicate that both environmental performance and CSR have a positive and significant effect on firms' market value. Moreover, firm age partially mediates the relationship between environmental and CSR factors and market value, although the magnitude of this mediating effect is relatively modest.

**Hypothesis 1.** ESG performance has a significant effect on financial reporting quality.

**Hypothesis 2.** managerial short-termism moderates the relationship between ESG performance and financial reporting quality.

### 3 | Research Methodology

The statistical population of this study comprises all companies listed on the Tehran Stock Exchange during the period 2019–2024. Due to the extensive size of the population and the specific challenges associated with it, as well as the presence of certain inconsistencies among the population members regarding the required research data, the following criteria were applied for sample selection, as presented in *Table 1*:

**Table 1. Stages and procedures for selecting sample company data.**

The Total Number of Companies Was 452 by the End of 2024.	Limitations	Row
60	Investment companies, insurance firms, banks, financial intermediaries, and credit institutions were excluded from the review list.	1
66	Companies that changed their fiscal year during the study period (2019–2024).	2
80	Companies whose fiscal year does not end in March.	3
74	Companies that were not listed on the stock exchange at any time between 2019 and 2024 (i.e., those that were removed during the period or joined the exchange after 2019).	4
52	Companies that experienced trading suspensions exceeding six months.	5
120	Number of companies under study	

According to *Table 1*, the sample for this study comprises 120 companies, yielding 720 company-year observations.

### 3.1 | Research Variables

#### Independent variable: environmental, social, and governance performance

ESG performance is considered the independent variable in this study. To score CSR, a latent variable ranging from zero to one is employed based on the method proposed by Albrecht [21], such that a value close to one indicates comprehensive disclosure of sustainability performance, whereas a value near zero reflects poor disclosure. To construct the sustainability performance disclosure indices, reliance was placed on companies' board activity reports, resulting in the definition of 60 indicators across the sustainability dimensions. The five characteristics of sustainability performance indicators are: 1) comparability and measurability, 2) significance, 3) comprehensiveness, 4) continuity, and 5) transparency [22]. The level of corporate sustainability performance disclosure is calculated according to the approach of [21] using the following formulas:

$$\text{SUS} = \text{CSPECOD} + \text{CSPSD} + \text{CSPE}$$

Economic performance disclosure of the company

$$= (\text{total disclosed items in the economic dimension}) \\ \div (\text{total disclosable items in the economic dimension}).$$

Social performance disclosure of the company

$$= (\text{total disclosed items in the social dimension}) \\ \div (\text{total disclosable items in the social dimension}).$$

environmental performance disclosure of the company

$$= (\text{total disclosed items in the environmental dimension}) \\ /(\text{total disclosable items in the environmental dimension}).$$

In the formulas above, the total disclosed items represent the sum of scores received by each company based on the indicators of the three dimensions, while the total disclosable items represent the sum of all possible scores that companies could achieve. The indicators in each dimension are equally weighted. Accordingly, the total possible score (denominator) is 60. In other words, the maximum disclosure score a company can receive is 60; if the score exceeds half of this value, the disclosure level is considered close to one and satisfactory, whereas a lower score indicates a disclosure level approaching zero and reflects weak performance.

### 3.2 | Dependent Variable: Investment Efficiency

In this study, consistent with the research of Kothari et al. [23], Wan [24], and Balboa et al. [25], the indicator used is a performance-adjusted measure of discretionary accruals, as proposed by Kothari et al. [23]. All models are calculated on an industry-year basis.

$$\text{TAccr}_{i,t} = \alpha_0 + \alpha_1 (1 / \text{Assets}_{i,t-1}) + \alpha_3 \Delta \text{Rev}_{i,t} + \alpha_4 \text{PPE}_{i,t} + \alpha_5 \text{ROA}_{i,t} + \varepsilon_{i,t}$$

$\text{TAccr}_{i,t}$ : total accruals are calculated as the change in non-cash current assets minus the change in interest-free current liabilities, less depreciation of tangible and intangible assets for the company during the year, divided by total assets at the beginning of the period.

$\Delta \text{Rev}_{i,t}$ : it is calculated as the annual change in operating revenues divided by total assets at the beginning of the period.

$\text{PPE}_{i,t}$ : property, plant, and equipment for company  $i$  in year  $t$  divided by total assets at the beginning of the year.

$\text{ROA}_{i,t}$ : Return On Assets (ROA) for company  $i$  in year  $t$  divided by total assets at the beginning of the year.

The residuals of the regression represent discretionary accruals. In this study, the absolute values of discretionary accruals are multiplied by negative one. Consequently, higher values indicate higher financial reporting quality.

$$(FRQ - TAccr_{i,t} = - | \varepsilon_{i,t} |)$$

### 3.3 | Moderating Variable: Product Market Competition

To measure product market competition, the Lerner index is employed, which is calculated as the difference between the product price and marginal cost of production (standardized by price). This index directly reflects market power, that is, a firm's ability to set prices above marginal cost. Accordingly, smaller values indicate higher product market competition, while larger values reflect greater market power.

A key challenge in empirical research is that marginal costs are not directly observable. Therefore, researchers typically estimate the Lerner index using the price-cost margin. In this study, following Hou and Robinson [26], Peress [27], and Irvine and Pontiff [28], the Lerner index is defined as the ratio of operating profit to sales, which is approximately estimated using *Eq. (1)*.

$$LI_{i,t-1} = \frac{SALE_{i,t-1} - COGS_{i,t-1} - SG \& A_{i,t-1}}{SALE_{i,t-1}}, \quad (1)$$

where in this equation:

$SALE_{i,t-1}$ : Sales in the year  $t - 1$ ;  $COGS_{i,t-1}$ : cost of goods sold in the year  $t - 1$ ;  $SG \& A_{i,t-1}$ : Selling, General, and Administrative Expenses (SG&A) in the year  $t - 1$ . The Lerner index is used to measure the degree of product market competition. This index reflects a firm's market share within the industry, with higher Lerner index values indicating greater market power and lower market competition. If a firm's Lerner index is below the annual average, it is assigned a value of one, indicating a high degree of market competition; otherwise, it is assigned a value of zero.

### 3.4 | Control Variables

In this study, to isolate the effect of ESG performance on financial reporting quality while accounting for product market competition in the Tehran Stock Exchange, the following control variables are employed:

#### Firm size (SIZE)

Firm size indicates the relative scale of a company. It is recognized as a factor influencing corporate financing choices. Firm size is also considered an important determinant of profitability and firm value. Larger companies, due to product diversification, greater market share, economies of scale, and the ability to diversify business activities, can reduce their business risk and enhance profitability. It is argued that there is a negative relationship between firm size and earnings opacity, as larger firms, benefiting from stronger networks and resources, can more effectively influence operational processes. Consequently, larger firms may achieve higher investment efficiency. Firm size is measured using the natural logarithm of total assets.

#### Return on assets

ROA reflects the extent to which a company's total assets generate profit in the current year, serving as an indicator of corporate profitability. Since ROA represents firm performance, an increase in performance is expected to lead to greater investment efficiency.

The following formula is used to calculate ROA:

Operating profit divided by total assets.

#### Growth opportunities (MBV)

A company's growth opportunities comprise the set of options that the firm may choose to pursue. In companies with high market value of equity, growth opportunities are also higher due to the strong performance of the firm's stock. In this study, growth opportunities are calculated using *Eqs. (3)–(5)*:

$$\text{Growth opportunities} = \frac{(\text{Total market value of rights holders' shares})}{(\text{Total book value of rights holders' shares})}$$

When a company's market value exceeds its book value, it indicates that the company has limited investment opportunities. The market price reflects shareholders' expectations regarding the company's value. It is argued that, as growth options increase, managers are more likely to select profitable projects. Therefore, they choose investments that benefit both shareholders and the company, thereby contributing to an increase in the firm's value. Consequently, a negative relationship is expected between investment opportunities and earnings opacity.

### Financial leverage (LEV)

Leverage refers to the presence of fixed costs in a company's cost structure. In this context, financial leverage refers to the level of a company's debt. The term leverage draws a parallel between the benefit derived from mechanical leverage and the benefit gained from fixed costs. The higher the degree of financial leverage, the greater the financial risk, as even a slight reduction in Earnings Before Interest and Taxes (EBIT) can result in a negative earnings per share. It is expected that, due to leverage pressure and increased debt levels, managers will exhibit poor performance regarding the quality of earnings. Therefore, as debt increases, the company's risk rises, which in turn leads to investment inefficiency [29]. Financial leverage is calculated by dividing total debt by total assets.

## 4 | Research Findings

Table 2 presents the descriptive statistics of the research variables. The mean score for ESG performance is 17.670, indicating that, on average, the companies under study have demonstrated a relatively satisfactory commitment to environmental obligations, social responsibilities, and corporate governance principles. If this value were measured on a scale of 100 points or a similar rating system, it would suggest that while efforts are underway to improve sustainable performance, there is still a significant gap from achieving optimal international standards in the areas of ESG performance. This level of performance may be attributed to institutional environment constraints, weak non-financial disclosure requirements, or a lack of awareness among managers about the benefits of sustainability strategies. Nonetheless, the average value of 17.670 could mark the beginning of a shift in companies' approaches to integrating ESG factors into their decision-making and reporting processes. Overall, this figure represents a context that could improve through more precise policy-making, tax incentives, and pressure from responsible investors.

**Table 2. Descriptive statistics of the research variables at the company level.**

Maximum	Minimum	Standard Deviation	Median	Mean	Variables
47.757	9.850	3.108	14.420	17.670	ESG performance
0.484	0.164	0.183	0.059	0.077	Financial reporting quality
14.138	10.257	0.627	12.09	12.14	Firm size
0.975	0.013	0.245	0.650	0.674	Financial leverage
10.360	0.489	1.058	1.392	1.715	Growth opportunities
0.728	0.117	0.340	0.108	0.128	ROA

The mean financial reporting quality is 0.078, indicating a relatively low level of transparency, reliability, and accuracy in the financial reports of the companies under study. Although this value might be considered acceptable in some studies or contexts, in the fields of finance and accounting, values close to zero typically suggest weaknesses in reporting quality. This is because indicators used to measure financial reporting quality—such as earnings smoothing, abnormal accruals, or measures of accounting conservatism—are typically expected to reflect greater transparency and accuracy when they trend towards higher values. A value of 0.078 indicates that users of financial statements (including investors, analysts, and regulatory bodies) may face challenges in assessing the true performance of the companies. This level of quality may be due to

weaknesses in corporate governance systems, a lack of international reporting standards, or the dominance of short-term profit-driven approaches within the companies. Comparing this value with previous studies, such as Francis et al. [30], which identified financial reporting quality as a key factor in reducing the cost of capital, suggests that the current level of reporting quality in the sample requires improvement and enhancement through more stringent oversight, clearer regulations, and professional development for managers and accountants. Additionally, the mean ROA is 0.128, indicating that the sample companies were able to generate a return of 12.8% on their assets. The mean growth opportunities is 1.715, suggesting that the market value of equity exceeds its book value.

Table 3 shows the frequency distribution of the product market competition variable. The results indicate that 72% of the companies exhibit high market competition, while 28% have companies with lower market competition.

**Table 3. Frequency distribution of the product market competition variable.**

Cumulative Percentage	Percentage of Each Category	Frequency of Each Category	Variable Values
72	72	518	0 (companies with low market competition)
100	28	202	1 (companies with high market competition)
	100	720	Total

The results of the Limper (Chow) F-test and the Hausman test for the research hypotheses are presented in Table 4.

**Step 1.** Determining whether the data is homogeneous or heterogeneous using the Limper (Chow) test.

**Table 4. Results of the Limper F-test (homogeneity of intercepts across cross-sections).**

Test Result	P-Value	Statistic	Test Model	Null Hypothesis ( $H_0$ )
The null hypothesis ( $H_0$ ) is rejected.	0.000	12.625	Hypothesis 1	The intercepts across all
The null hypothesis ( $H_0$ ) is rejected.	0.000	13.320	Hypothesis 2	cross-sections are identical.

In the Limper F-test, the null hypothesis ( $H_0$ ) tests the use of pooled data methods against the alternative hypothesis ( $H_1$ ), which suggests the use of panel data methods. Based on the significance level obtained from Table 4, the result of this test indicates that the cross-sections under study are heterogeneous and exhibit individual differences. Therefore, the use of panel data methods is more appropriate for all the models considered. After selecting the panel data method through the Limper test, the Hausman test was conducted. In this test, if  $H_0$  is accepted, the random effects model is used; if  $H_1$  is accepted, the fixed effects model is used. A summary of the Hausman test results is provided in Table 5.

**Table 5. Results of the hausman test (choice between fixed and random effects).**

Test Result	P-Value	Chi-Square Statistic	Test Model	Null Hypothesis ( $H_0$ )
The null hypothesis ( $H_0$ ) is accepted.	0.000	30.324	Hypothesis 1	There is no difference in the
The null hypothesis ( $H_0$ ) is accepted.	0.000	32.658	Hypothesis 2	systematic coefficients (the model is random effects).

As shown in the results of Table 5, the value of this statistic is not statistically significant for all the models considered. The reported significance level in Table 5 for all hypotheses is less than 0.05, indicating the acceptance of the null hypothesis ( $H_0$ ) and the rejection of the alternative hypothesis ( $H_1$ ) at the 95% confidence level, thereby suggesting the use of the fixed effects model.

## 4.5 | Hypothesis Testing

The results of the first hypothesis test, presented in *Table 6*, show that ESG performance has a positive (0.188) and statistically significant (0.000) effect on financial reporting quality. Therefore, the first hypothesis is accepted at the 5% significance level. This suggests that improvements in ESG performance lead to an increase in financial reporting quality. The adjusted R-squared indicates that approximately 47.2% of the variation in the dependent variable, financial reporting quality, can be explained by the independent variable, ESG performance, and other variables.

**Table 6. The impact of ESG performance on financial reporting quality.**

$FRQ_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 LEV_{it} + \beta_3 MBV_{it} + \beta_4 ROA_{it} + \beta_5 SIZE_{it} + e_{it}$					
Dependent Variable: Financial Reporting Quality					
VIF	Significance Level	t	Unstandardized Coefficients		Variables
			Standard Error	Coefficient	
-	0.018	-2.228	0.114	-0.254	Intercept coefficient
1.166	0.000	4.585	0.041	0.188	ESG <sub>it</sub>
1.025	0.004	2.724	0.029	0.079	LEV <sub>it</sub>
1.263	0.000	4.867	0.015	0.073	MBV <sub>it</sub>
1.367	0.021	-2.267	0.064	-0.145	ROA <sub>it</sub>
1.213	0.000	4.083	0.024	0.098	SIZE <sub>it</sub>
0.472					Adjusted R <sup>2</sup>
1.685					Durbin–Watson statistic
8.882					F-statistic
0.000					Probability of the F-statistic

The Durbin–Watson statistic ranges between 1.5 and 2.5, indicating that the residuals, or the differences between the actual and predicted values by the regression model, are independent. The F-test significance level is 0.000, which is less than 0.05, confirming the overall statistical significance of the model. Furthermore, in testing the first hypothesis, the Variance Inflation Factor (VIF) for all variables was below 10, indicating that multicollinearity among the research variables was not an issue. Regarding other variables, the negative sign of ROA (ROA = -0.145) indicates a negative and statistically significant relationship ( $p = 0.021$ ) with financial reporting quality. Additionally, the results in *Table 6* show that financial leverage, growth opportunities, and firm size have positive and statistically significant relationships with financial reporting quality, with coefficients of 0.079, 0.073, and 0.098, and significance levels of 0.004, 0.000, and 0.000, respectively, at the 95% confidence level.

The results of the second hypothesis test, presented in *Table 7*, indicate that product market competition has a negative (-0.097) and statistically significant ( $p = 0.007$ ) effect on the relationship between ESG performance and financial reporting quality. Therefore, the second hypothesis is confirmed at the 5% significance level. This suggests that in firms with low market competitiveness, the positive impact of ESG performance on financial reporting quality is weakened. The adjusted R<sup>2</sup> indicates that approximately 51.3% of the variation in the dependent variable, financial reporting quality, can be explained by the interaction between ESG performance and product market competition, along with other variables. The Durbin–Watson statistic ranges between 1.5 and 2.5, confirming that the residuals, or the differences between the observed and predicted values from the regression model, are independent. The F-test significance level is 0.000, which is below 0.05, indicating the overall statistical significance of the model. Furthermore, in testing the second sub-hypothesis, the VIF for all variables was below 10, suggesting that multicollinearity among the research variables is not a concern.

**Table 7. The effect of product market competition on the relationship between esg performance and financial reporting quality.**

$FRQ_{it} = \beta_0 + \beta_1 COMP_{it} + \beta_2 ESG_{it} + \beta_3 MSH_{it} * ESG_{it} + \beta_4 LEV_{it} + \beta_5 MBV_{it} + \beta_6 ROA_{it} + \beta_7 SIZE_{it} + e_{it}$					
Dependent Variable: Financial Reporting Quality					
VIF	Significance Level	t	Unstandardized Coefficients		Variables
			Standard Error	Coefficient	
-	0.014	-2.566	0.113	-0.290	Intercept coefficient
1.166	0.000	-4.258	0.098	-0.420	COMP <sub>it</sub>
1.350	0.000	4.919	0.037	0.182	ESG <sub>it</sub>
1.356	0.007	-2.852	0.034	-0.097	COMP <sub>it</sub> * ESG <sub>it</sub>
1.265	0.000	3.548	0.031	0.110	LEV <sub>it</sub>
1.932	0.000	4.620	0.021	0.097	MBV <sub>it</sub>
1.251	0.041	-2.058	0.068	-0.140	ROA <sub>it</sub>
1.367	0.000	3.577	0.026	0.093	SIZE <sub>it</sub>
0.513					Adjusted R <sup>2</sup>
1.810					Durbin–Watson statistic
9.952					F-statistic
0.000					p-value of the F-statistic

## 6 | Conclusion

This study examines the effect of ESG performance on financial reporting quality, with a focus on product market competition. By analyzing 120 firms listed on the Tehran Stock Exchange, the findings provide valuable insights into how managerial behavior interacts with ESG performance to influence the quality of financial reporting.

Today, ESG performance is recognized as a key component in assessing corporate responsibility and plays a crucial role in the decision-making processes of investors and other stakeholders. On the other hand, financial reporting quality serves as a tool for clarifying firms' actual performance and mitigating information asymmetry. The interaction between these two concepts can foster public trust, reduce the cost of capital, and enhance economic decision-making. However, one factor that may undermine this relationship is managerial short-termism—a phenomenon in which managers, by focusing excessively on short-term objectives, neglect the long-term interests of the organization and its stakeholders.

The results of testing the first hypothesis, which posited a positive relationship between ESG performance and financial reporting quality, confirmed this association as statistically significant. Pearson correlation analysis indicated that improvements in firms' ESG performance are associated with enhancements in the quality of their financial reports. This finding aligns with previous studies, including Francis et al. [30] and Chtourou et al. [31], which emphasize the role of ESG mechanisms in improving the transparency and reliability of financial information. By strengthening monitoring processes, enhancing corporate governance, and fostering stakeholder engagement, ESG performance encourages firms to produce financial reports that are accurate, comprehensive, and timely. Consequently, ESG can be regarded as an effective tool for promoting financial integrity and organizational accountability.

The hypothesis that product market competition attenuates the positive relationship between ESG performance and financial reporting quality introduces a nuanced and significant analytical perspective. Under conditions of intense product market competition, firms face compounded and often conflicting pressures that can influence their reporting outcomes. First, high competition frequently reduces profit margins and shifts managerial focus toward short-term survival and market share preservation. In such contexts, limited resources—financial, human, and temporal—may be diverted from investing in the complex and costly processes required to collect, verify, and disclose detailed ESG performance data, and instead directed toward

activities that directly enhance production, marketing, or cost reduction. Consequently, even firms with strong actual ESG performance may assign lower priority to high-quality reporting of these efforts.

Second, in competitive environments, the disclosure of detailed ESG information, particularly precise performance metrics, can be a double-edged sword. Firms may be concerned that full and transparent disclosure provides competitors with valuable information that could be used strategically against them—for example, by replicating successful sustainability initiatives or exploiting potential weaknesses. Such concerns may foster superficial disclosure or “greenwashing,” where ESG claims are presented primarily for marketing purposes without corresponding rigorous financial reporting. As a result, the positive link between actual ESG performance and financial reporting quality is weakened. Therefore, competitive pressure can create incentives for reducing transparency in ESG disclosure, particularly when such disclosure is perceived as a strategic cost or risk rather than an investment advantage.

## Author Contributions

Saeed Noormohammadi was responsible for the conceptualization of the research, development of the theoretical framework, data collection, econometric modeling, and analysis using EViews software. The author also interpreted the findings, prepared the manuscript, and approved the final version for publication.

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## Data Availability

The data used in this study were obtained from financial and non-financial reports of firms listed on the Tehran Stock Exchange for the period 2019–2024. Processed data supporting the findings of this study are available from the corresponding author upon reasonable request.

## Conflicts of Interest

The author declares no conflict of interest regarding the publication of this article.

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