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Impact of ESG Performance on Corporate Growth Ability——Analysis of the Empirical Results on the Basis of the Panel Data of Chinese Listed Companies from 2010–2022

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Abstract

With the increasing attention of society to sustainable development, ESG performance has increasingly become an important dimension in evaluating corporate performance. The importance has shifted from the display of corporate image to the measurement of business growth and long-term value. The existing research investigates the relationship between ESG performance and enterprise growth. The empirical analysis of capability is still insufficient. On the basis of a systematic review of the relevant theories and literature, this study uses a two-way fixed effects model to analyze Chinese listed companies from 2010–2022 to investigate in depth the relationship between ESG performance and corporate growth ability. The study revealed that ESG implementation inhibits enterprise growth in the short term because of increased costs, and the extent of this impact is influenced by ownership methods and regional factors. This study provides corresponding insights for relevant entities, such as enterprises and the government. It is suggested that relevant entities such as enterprises and the government should comprehensively consider long-term and short-term cost-effectiveness and adopt differentiated strategies when implementing ESG.

Keywords

ESG performance, corporate growth ability, cost-effectiveness, empirical research, regional heterogeneity, equity heterogeneity

1. Introduction

As global sustainable development has received increasing attention, ESG (environment, social and governance) performance has become a key indicator for measuring corporate sustainability and social responsibility, from an add-on item of corporate image to an important business growth point, even the "second financial report". An increasing number of investors and rating agencies are incorporating ESG performance into their assessments, driving companies to increase their market competitiveness. Wang and Yang (2022) noted that ESG ratings can indirectly promote corporate innovation and value chain upgrading by alleviating financing constraints and supply chain concentration. In February 2024, the "Guidelines for A-Shares Sustainability Reporting (Trial)" issued by the China Securities Regulatory Commission further promoted the

standardization of ESG reporting in China. However, despite the gradual improvement in policies, issues such as the standardization of ESG disclosure still need to be resolved.

2. Theoretical Analysis and Hypotheses

This paper's theoretical framework is based on environmental, social and governance (ESG) theory, enterprise growth theory and path dependence theory to explore how ESG performance affects enterprises' growth ability, especially the dynamic growth process reflected by the growth rate of operating income. ESG theory provides a comprehensive framework for corporate social responsibility and sustainable development and emphasizes that enterprises should achieve long-term value creation in three dimensions: the environment (E), society (S) and corporate governance (G). Research shows that companies with excellent ESG performance usually have better governance structures and sustainable business strategies, thus helping increase operating income.

The growth theories of the firm, especially the resource-based theory, emphasize the decisive role of the internal resources and capabilities of the firm in the growth process. Han (2024) noted that resource-based theory suggests that an enterprise's heterogeneous resources play a key role in the growth process, whereas Zhang (2019) suggested that companies with excellent ESG performance can increase their economic potential through green technology and social welfare. Brand reputation and efficient governance mechanisms have accumulated valuable resources. These resources can reduce the cost of external resource acquisition, improve innovation capability and operational efficiency, and thus promote enterprise growth. However, excessive ESG investment may lead to unbalanced resource allocation and affect short-term profitability.

3. Research Design

3.1 Research Samples and Data Sources

In this study, listed companies from 2010–2022 were taken as research objects to empirically test the impact of ESG performance on the growth ability of enterprises. The relevant data on enterprise growth capability are obtained through analysis of the financial statements of listed companies. The data of corporate ESG levels were obtained from the CNRDS Listed Companies ESG Rating Database. The ESG Rating Database of Listed Company (ESG-R) is constructed on the basis of international ESG disclosure standards such as ISO 26000, GRI Standards, and SASB Standards and the design ideas of well-known ESG databases at home and abroad, as well as relevant policies of China's ESG information disclosure. developed a unique ESG scoring system for Chinese enterprises. The data of the remaining variables were obtained from the CSMAR database.

3.2 Model Settings

On the basis of the theory and analysis above, the following econometric model is used in the present study:

$$Growth_{it} = \beta_0 + \beta_1 ESG_{it} + \beta_2 \text{ X} + \alpha_i + \lambda_t + \varepsilon_{it} \quad (1)$$

where $Growth_{it}$ is an explained variable indicating the corporate growth capability of listed company i in year t; ESG_{it} is the core explanatory variable indicating the ESG level of enterprise i in year t; X represents a series of control variables; α_i and λ_t are the individual and year fixed effects, respectively; and ε_{it} is a random disturbance term. β_0 is a constant term, β_1 We measured the impact of the ESG level on the enterprise's growth ability, which was the parameter we focused on.

3.3 Interpretation of the Variables

Explained variable: Enterprise growth ability. This paper refers to the paper by Li and Zheng (2022) in the selection of enterprise growth indicators because the growth of an enterprise is often accompanied by dynamic changes in economic aggregates such as enterprise size, sales ability, and profitability. The literature has used sales revenue, the number of assets and the number of employees to measure the growth of enterprises. Considering that employees are strongly affected by productivity and machine replacement, the growth rate of revenue from the main business, which can reflect sustainable growth, was used to measure the sustainability

of enterprises. The indicator of growth ability is measured by the ratio of the operating income of the current year to the operating income of the previous year -1.

Explanatory variable: ESG level. As mentioned above, the data come from the ESG rating database of CNRDS listed companies. As a database under the China Research Data Service Platform, it has a unique scoring system. Through data collection and integration, the ESG rating system of listed companies is used to evaluate the environmental, social and corporate governance of listed companies. Assessments are conducted and used for risk and opportunity assessment, decision support, and dynamic data updates.

Control variables: This paper selects a series of corporate finance and corporate governance control variables, including enterprise size, which is measured by the logarithm of the enterprise's total assets at the end of the year, and return on investment (ROA), which uses the relationship between the enterprise's EBIT and the enterprise's profit. The average total assets were measured by the ratio of the average total assets; the asset–liability ratio (Lev) was measured by the ratio of the total liabilities to the total assets of the enterprise; and the shareholding concentration (Top1) was measured by the proportion of the shares held by the largest shareholder in the total shares of the enterprise. We measured board size (Board) by the number of directors on the board of directors and independent director proportion (Indep) by using the ratio between the total number of independent directors and the total number of board members.

Table 1: Variables

	Variable name	Variable definition	Variable description
Explained variable	Growth	Enterprise growth ability	Operating income of the current year and the previous year Ratio measure of operating income
Explanatory variables	ESG	ESG level	Reflects the environmental, social and corporate governance status of listed companies
Control Made Change Quantity	Size	Enterprise size	Logarithmic measure of the total assets of the enterprise at the end of the year
	Lev	Asset-liability ratio	Ratio of total liabilities to total assets of the enterprise
	Roa	Return on investment	Measured by the ratio of the profit before interest and taxes of the enterprise to the average total assets of the enterprise
	Board	Board size	Measure of the number of directors on the board of directors
	Top1	Ownership concentration	Measured by the proportion of the shares held by the largest shareholder to all the shares of the company

4. Measurement Results and Analysis

4.1 Sample and Data Processing

On the basis of the initial research sample, we further screened the initial research sample as follows: exclusion of STs, PTs, the financial industry and companies that were delisted during the sample period; and deletion of companies that invested in tax havens such as the Cayman Islands, the British Virgin Islands, Bermuda Islands and Hong Kong. To avoid the influence of extreme values, in the present study, all continuous variables are rounded up by 1%.

4.2 Descriptive Statistics of the Variables

Table 2 lists the descriptive statistics for the main model variables in this paper. The number, mean, standard deviation, and minimum and maximum values of each variable are shown in Table 2. During the study period, the mean of the explained variable of corporate growth capability was 0.380, and the standard deviation was 0.145, indicating that the difference in the growth capability of various companies during the study period was relatively small; the mean value of the explanatory variable of the corporate ESG level was 27.051, and the standard deviation was 11.274, indicating that the ESG level of the companies in the study varied significantly.

Table 2: Descriptive statistics

Variable type	Variable name	Sample size	Mean value	Standard deviation	Minimum value	Maximum value
Explained variable	Growth	27061	0.150	0.307	-0.653	1.824
Explanatory variables	ESG	27313	27.051	11.274	1.575	77.922
Control Made Change Quantity	Size	27313	22.122	1.225	19.585	26.430
	Lev	27313	0.412	0.202	0.027	0.925
	Roa	27313	0.045	0.066	-0.375	0.254
	Board	27313	2.119	0.195	1.609	2.708
	Top1	27313	0.339	0.145	0.080	0.758

4.3 Basic Regression

Table 3 shows the regression on the benchmark model by changing the control variables and fixed effects sequentially to test the influence of the explanatory variable enterprise ESG level and the explained variable enterprise growth ability. The specific regression results are shown in Table 3.

Columns (1)-(4) show the effect of the level of corporate ESG performance on corporate growth ability when the control variable is not added or fixed effect, when the control variable and fixed effect are not added, when the control variable is added and fixed effect is added, and when the control variable and fixed effect are added. Under these four conditions, the impact direction of the enterprise's ESG level on the enterprise's growth ability was significantly negative, indicating that an increase in the enterprise's ESG level can reduce the enterprise's growth ability. When the control variables are completely added and the fixed effects are used, the enterprise's ESG level's direction of influence on the enterprise's growth ability has not changed and is still significant at the 1% level. This shows that for every 1 unit increase in ESG performance, the enterprise growth capability index decreases by approximately 0.2% points. According to Li and Zheng (2022), the possible reason is that in the process of improving the ESG level, enterprises may need to invest certain resources, such as the upgrade of environmental protection equipment and the improvement of employee benefits. These short-term cost inputs may have a certain effect on the short-term profits of the enterprise, thus negatively affecting the ability of the enterprise to grow.

Table 3: Results of benchmark regression

Variable	(1)	(2)	(3)	(4)
ESG	-0.001*** (0.001)	-0.002*** (0.001)	-0.001*** (0.002)	-0.002*** (0.001)
Size	NO	NO	-0.006** (0.003)	0.036*** (0.004)
Lev	NO	NO	0.352*** (0.019)	0.515*** (0.024)
Roa	NO	NO	1.986*** (0.054)	2.452*** (0.047)
Board	NO	NO	-0.044*** (0.013)	0.025*** (0.022)
Top1	NO	NO	-0.094*** (0.018)	0.224*** (0.037)
Individual fixed effects	NO	YES	NO	YES
Time fixed effect	NO	YES	NO	YES
Sample size	27313	27313	27313	27313
R^2	0.003	0.003	0.108	0.116

Note: The standard errors are in parentheses, and *, ** and *** indicate that the significance tests of 10%, 5% and 1% passed, respectively. The control variables are Size, Lev, Roa, Board, and Top1.

4.4 Stability Test

4.4.1 Replacement of Core Explanatory Variables

In the benchmark regression, the relevant data in the CNRDS database were used to measure the ESG level of the enterprise. To test the robustness of the results, we used Huazheng ESG performance as a new core

explanatory variable for analysis and reported the benchmark regression results. The observations in Column (2) of Table 4 show that when control variables are added and individual effects are fixed, the correlation coefficient between Huazheng ESG performance and enterprises is -0.011, and it is significantly negative at the 1% level, which is consistent with the baseline regression results. This shows that after replacing the core explanatory variables, the model still has good robustness.

4.4.2 Changing the Measurement Method

To test the robustness and reliability of the empirical results under different estimation models, the Driscoll_Kraay standard error method was used to reestimate, and the baseline regression results were reported. The specific test results are shown in Table 4. For the stability of the empirical results under different estimation models, the regression results of Driscoll_Kraay are shown in Column (3): the direction of the impact of the enterprise's ESG level on its growth ability is still negative, which is consistent with the benchmark regression results, indicating the robustness of the results.

4.4.3 Changing the Sample Volume

This paper draws on the approach of Zhang Ping and Zhou Qianru (2022). The indicator of enterprise growth capability is scaled up and down by 1% to test the robustness of the estimation results. Table 4 shows the results of the robustness test. Column (5) lists the effect of an enterprise's ESG level on its growth ability when control variables and fixed individual effects are added at the same time. The regression results reveal that the impact of the level of corporate ESG performance on growth ability is significantly negative at the 1% level. The regression results were consistent with the baseline regression results and passed the stability test.

4.4.4 Excluding Observations in Special Years

To remove the impact of the external shock of the epidemic on enterprise growth ability, the observed values for the years 2020–2022 are removed from the present study, and then a stability analysis is performed. The results are shown in Table 4. Column (6) shows the influence of the level of corporate ESG performance on growth ability when control variables and fixed individual effects are added. The regression results reveal that the impact of the level of corporate ESG performance on growth ability is significantly negative at the 1% level, indicating that as the level of corporate ESG performance gradually increases, a higher level of corporate ESG performance significantly inhibits growth ability. The regression results were consistent with the baseline regression results and passed the stability test.

Table 4: Stability check

Variable	ESG (1)	Huazheng ESG (2)	Driscoll_Kraay (3)	Changing the sample volume (4)	Deleted observed value of epidemic year (5)
Explanatory variables	-0.002*** (0.001)	-0.011*** (0.003)	-0.002** (0.001)	-0.002*** (0.001)	-0.002*** (0.001)
Control variables	YES	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES	YES
Time fixed effect	YES	YES	YES	YES	YES
Sample size	27313	27313	27313	27313	18090
R^2	0.116	0.115	0.116	0.116	0.099

Note: Same as Table 3

4.5 Endogeneity Analysis

The econometric model in this paper may have certain endogeneity problems. The core explanatory variable is the enterprise's ESG level, and the explained variable is the enterprise's growth ability. The ESG level of an enterprise affects its growth ability to a certain extent. In turn, the growth ability of an enterprise may further affect its ESG performance. Therefore, the econometric model may have a reverse causation problem.

To solve the endogeneity problem, this study refers to the approach of Gu and Jun (2022) and selects the annual mean value of the enterprise's ESG level in the industry as an instrumental variable. In Table 5, the regression results of the first stage and the second stage are reported in Columns (1) and (2), respectively. The annual mean value of the industry's ESG has a significant positive effect on the level of corporate ESG, and the level of corporate ESG has a significant positive effect on the level of corporate ESG. There was still a

significant inhibitory effect on growth ability, which was consistent with the direction of the baseline regression results. In summary, after overcoming endogeneity, the research results in this paper are still robust.

Table 5: Estimation results of treatment endogeneity

Variable	First-stage regression (1)	Two-stage regression (2)
ESG		-0.008*** (0.001)
Instrumental variables	0.955*** (0.019)	
Control variables	YES	YES
Individual fixed effects	YES	YES
Time fixed effect	YES	YES
R-squared	0.106	0.053
Wald-F test		P=0, pass
N	27313	27313

Note: The standard errors are in parentheses, and *, ** and *** indicate that the significance tests of 10%, 5% and 1% passed, respectively.

4.6 Mechanistic Analysis

The foregoing analyses have discussed the direct impact of the environment and social and governance (ESG) on enterprise growth but still have not revealed the specific mechanisms behind it. This paper uses mediating effect analysis to further understand how ESG performance affects corporate growth through the mediating variable of return on assets (ROA). ROA is an important indicator for measuring the efficiency of corporate utilization of shareholder capital, reflecting the profitability and financial health of the corporation. The reason for choosing ROA as a mediating variable is that it not only visually reflects the financial performance of the enterprise but is also closely related to ESG practices. By analyzing the relationship between ROA and ESG performance, we can reveal how the ESG efforts of enterprises affect and promote their growth.

In this paper, referring to Jiang (2022). It is only necessary to conduct a mechanism analysis on X --> M, while M --> Y is supported by literature. The details are set as follows:

$$\text{Growth}_i = \alpha_1 \text{ESG}_\text{i} + X_i\beta_1 + \varepsilon_1 \tag{2}$$

$$\text{middle}_i = \gamma + \alpha_2 \text{ESG}_\text{i} + X_i\beta_2 + \varepsilon_2 \tag{3}$$

$$\text{Growth}_i = \alpha_3 \text{ESG}_\text{i} + \alpha_4 \text{middle}_i + X_i\beta_3 + \varepsilon_3 \tag{4}$$

where middle represents the mediation variable ROA; γ represents the constant term; ε1, ε2, and ε3 are random error terms; and the explanatory variables, explained variables and control variables are the same as those in the benchmark model. Equation (4.2) represents the overall effect of an enterprise's ESG level on its growth ability. Equation (4.3) represents the effect of the enterprise's ESG level on the mediating variable. in Formula (4.4) α_3 represents the direct effect of a company's ESG level on its growth ability after controlling for the influence of the mediating variables. Combining Equations (4.3) and (4.4) can further yield the mediating effect $\alpha_2 * \alpha_4$, that is, the influence effect of the enterprise's ESG level on the enterprise's growth ability through the mediating variable. The specific regression results are shown in Table 6.

In Table 6, the total effect of an enterprise's ESG level on its growth ability is reported in Column (1). The impact of the enterprise's ESG level on the enterprise's growth ability is significantly negative, indicating that for every unit increase in ESG, the enterprise's growth ability will be affected by an increase in the ESG level of 1 unit. will be reduced by 0.3%. The effect of ESG performance on the mediating variable, that is, the return on total assets, is reported in Column (2). The regression results show that the mediating variable is significant at the 1% level. For every 1 unit increase in the ESG level of a company, the return on total assets decreases by 0.1. %. In Column (3), the direct effect of an enterprise's ESG level on its growth ability is reported after

controlling for the mediating variables. The results show that after controlling for the mediating variable of return on total assets, the ESG level of the enterprise still has a significant negative effect on the ability of the enterprise to grow. partially accounted for the mediating effect. As a result, the direct effect of ESG performance on enterprise growth ability is -0.002, and the mediating effect corresponding to the ROE channel is 0.002452[1], accounting for -122.6% of the total effect2. The economic implication is that for every unit increase in the enterprise's ESG level, the enterprise's growth ability will be reduced by 0.2% directly and by -122.6% through the mediating effect.

Table 6: Results of the impact mechanism of ESG performance on enterprise growth ability

Variable	(1)Exclusive of ROA	(2)Intermediary Variables on ROA	(3)Include ROA
ESG	-0.003*** (0.001)	-0.001*** (0.001)	-0.002*** (0.001)
Return on investment (ROA)			2.452*** (0.047)
Control variables	YES	YES	YES
Individual fixed effects	YES	YES	YES
Time fixed effect	YES	YES	YES
Sample size	27313	27313	27313
R^2	0.014	0.147	0.116

Note: The control variable ROA was treated specifically, and the rest of the variables are the same as those in Table 3.

4.7 Heterogeneity Analysis

According to the geographic location of the provinces where they are located, listed companies can be divided into eastern, central and western regions. Listed companies in different regions may differ in terms of the impact of corporate ESG performance on their growth ability.

For enterprises in the eastern region, the regression results are shown in Column (2) of Table 7. The regression coefficient between the ESG level of enterprises and the growth capability of enterprises is -0.002, and the value is significantly negative at the 1% level; for the central and western regions of enterprises, the regression results are shown in Column (3). The regression coefficient between the enterprise's ESG level and the enterprise's growth ability is -0.001, which is significantly negative at the 1% level; however, the intersection term of the ESG and region dummy variables is not significant. Therefore, although an inhibitory effect exists, the difference is not significant.

These results show that the inhibitory effect of corporate ESG level on corporate growth ability exists for companies in East China, Central China and West China. However, the difference was not significant.

In addition, China's listed companies can be divided into state-owned holding companies and nonstate-owned holding companies according to their method of holding. Owing to the different natures of enterprises, the influence on the development of an enterprise's ESG level and the ability of the enterprise to grow also differ. On this basis, investigating the impacts of differences in holding methods on corporate growth ability is important.

The regression results show that, for state-owned enterprises, as shown in Column (5), the regression coefficient between the enterprise's ESG level and the enterprise's growth ability is -0.002, and it is significantly negative at the 1% level; for nonstate-owned enterprises, as shown in Column (6), the regression coefficient between the enterprise's ESG level and the enterprise's growth capability is -0.001, which is significantly negative at the 1% level. In addition, the interaction term of ESG performance and holdings passed the significance test, which indicates that, regardless of whether the enterprise is a state-owned enterprise or nonstate-owned enterprise, the ESG level of the enterprise significantly reduces the growth ability

[1] Specific formula: mediating effect=-0.001* (2.452)=-0.002452
[2] Specific formula: percentage of total effect=0.002452/ (-0.002)=-122.6%

of the enterprise, and the impact on state-owned enterprises is greater than that on nonstate-owned enterprises. According to the goal orientation of state-owned enterprises and nonstate-owned enterprises, this may be related to the fact that state-owned enterprises bear greater responsibility in assuming social responsibility.

Table 7: Heterogeneity test

	Eastern	Midwest	State-owned enterprises	Non-state-owned enterprises
ESG	-0.002*** (0.001)	-0.001*** (0.001)	-0.002*** (0.001)	-0.001*** (0.001)
Control variables	YES	YES	YES	YES
Individual fixed effects	YES	YES	YES	YES
Time fixed effect	YES	YES	YES	YES
Sample size	18238	18238	8993	18060
R^2	0.079	0.066	0.06	0.09
Chow test	Fail		Pass	

Note: Same as Table 3.

5. Conclusions and Suggestions

5.1 Study Conclusions

To study the causal relationship between ESG performance and corporate growth ability, the present study used a two-way fixed effects model to perform stability analysis by replacing the core explanatory variables, changing the measurement methods, changing the sample size, and excluding the observed values in special years. While performing mechanism analysis, the instrumental variable method was used to conduct endogeneity analysis with the industry average ESG score as an instrumental variable, while regional heterogeneity and equity heterogeneity were analyzed. The empirical analysis shows that ESG performance is negatively correlated with enterprise capabilities and that current ESG implementation inhibits enterprise growth ability to a certain extent. In general, existing ESG implementation in China is not conducive to the growth of enterprises, and enterprises with different shareholding methods and regions are affected; the impact of state-owned enterprises is stronger than that of nonstate-owned enterprises, and the inhibitory effects on enterprises in the eastern region and the central and western regions are similar. To meet ESG requirements by investing resources in improving the environment and fulfilling social responsibility, a short-term increase in costs and a decline in profits affect the growth rate. The “cost effect” is more obvious for state-owned and east-central enterprises.

5.2 Suggestions

When implementing ESG strategies, enterprises should weigh short-term costs and long-term benefits. The necessity and long-term interests of resource investment should be evaluated to avoid ignoring the importance of ESG performance due to short-term financial pressure. Active technological innovation and the use of emerging technologies improve environmental performance and social responsibility efficiency and reduce cost pressure. Digital technology can be used to collect and analyze ESG data to increase the transparency of information disclosure, enhance the trust of stakeholders, and better assess risk and develop strategies.

The government should formulate differentiated ESG policies on the basis of the nature and region of enterprises, implement a layered and phased strategy, and encourage and support different enterprises in the implementation of ESG. For example, flexible plans are adopted for western and nonstate-owned enterprises, which are more inhibited and gradually promoted. From the perspective of life cycle management, adaptive ESG implementation strategies are developed for companies at different life cycle stages to balance growth and ESG requirements and improve the overall ESG performance of the enterprise.

The government should also guide awareness raising and policy coordination. In terms of guiding awareness improvement, the government needs to vigorously promote the ESG concept, enhance the awareness of ESG among enterprise management and employees, and enhance the understanding of the importance of ESG for the long-term development of enterprises through training and seminars to ensure the voluntary and internally driven behavior of enterprises. To promote the transition of ESGs to the mature stage.

In terms of policy coordination, support such as tax incentives, subsidies, and low-interest loans will be provided to reduce the cost pressure for companies to implement in the early stage, the ESG evaluation system for companies will be improved, the influence of heterogeneity in the three dimensions will be considered in the development of standards, and companies will be required to disclose information on a regular basis to improve transparency and cooperation. Public trust makes ESG performance effective in promoting the sustainable growth of enterprises.

5.3 Research Limitations and Prospects

Through theory combined with empirical evidence, this study revealed the relationship between ESG performance and enterprise growth ability, especially the dynamic correlation in the growth rate of operating income, and investigated the moderating effect of ESG performance on the growth ability of enterprises in different life cycles and the moderating effect of factors such as market power, which provides a theoretical basis. Research, investors, corporate management and policy-makers provide references and promote improvements in the ESG evaluation system. However, there are deficiencies. For example, the indicator only describes the growth capability of enterprises from the growth of operating income, and the indicators are relatively singular.

Existing studies have laid the foundation for understanding the relationship between ESG performance and enterprise growth, but there are still research gaps. Insufficient sample diversity limits the universality of the study. In the future, the scope of the sample should be expanded to cover companies in different countries and industries; methodology limitations lead to an insufficient understanding of the dynamic process of the impact of ESG performance on enterprise growth; time series, nonlinear relationships and differences in enterprise life cycles should be considered; and existing studies often consider ESG performance as a whole and lack in-depth analysis of the heterogeneous impact of the three dimensions. In the future, the heterogeneous influences of each dimension of ESG, the impact of the subjective cognition and behavioral choices of the enterprise on the implementation effect, and the development of adaptability can be studied in depth. A stronger ESG evaluation framework promotes the harmonious development of the global economy and society.

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Conflicts of Interest

The authors declare no conflict of interest.

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