

Can Executive Green Awareness Improve ESG Performance of Enterprises

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Abstract

After the 19th National Congress, the 20th National Congress of the Communist Party of China once again emphasized the importance of high-quality development. ESG (environment, social and governance) is currently an important standard for measuring the level of green and sustainable development of enterprises in the international community. It plays an increasingly important role in measuring the high-quality green development of enterprises and has received widespread attention from scholars. This article empirically analyzes the data of A-share listed companies from 2011 to 2020 and explores the impact of green cognition among corporate executives on ESG performance. The research results found that there is a significant positive correlation between corporate executives' green cognition and corporate ESG. The higher the level of green cognition of corporate executives, the better their ESG performance. Further research on the ESG indicator sub items found that corporate executives' green awareness significantly improves their environmental responsibility and governance scores, while the impact on corporate social responsibility scores is not significant.

Keywords

Executive Green Awareness; ESG.

1. Introduction

At present, China's economy has entered an important stage of high-quality development, achieving a transformation from high-speed economic development to high-quality development. After the 19th National Congress, the 20th National Congress of the Communist Party of China once again emphasized the importance of high-quality development. With the rapid development of the economy, various environmental pollution problems have emerged one after another, and their negative effects are becoming increasingly serious. To this end, we should stand in the perspective of long-term development and continue to implement the development strategy of Clear waters and green mountains. ESG is an abbreviation for Environment, Social, and Governance, which can comprehensively evaluate a company's environmental performance, fulfilling social responsibilities, and internal governance status. This indicator can better reflect the contribution of enterprises to society and meet the requirements of high-quality development. Therefore, it has received widespread attention from the public, managers, and academia. The ESG performance of enterprises can bring many economic consequences, and current research mainly focuses on the impact of ESG performance on enterprises, while the research on the factors that affect ESG performance of enterprises is not yet complete. This article starts from the perspective of enterprise managers and focuses on exploring the impact of green awareness among corporate executives on ESG performance.

The contributions of this article are as follows: 1. Further improving the research on the factors affecting ESG, providing certain ideas and reference value for enterprises to improve their own ESG performance. 2. The study investigated the impact of personality traits of corporate executives on the development of enterprises, which has profound reference significance for enterprises to make choices when selecting and recruiting management personnel.

2. Theoretical Analysis and Research Hypotheses

The characteristics of managers often have a profound impact on the enterprise. Xia Yue (2023) used heavily polluting industry companies listed on the Shenzhen and Shanghai A-shares from 2010 to 2017 as research samples to analyze the impact of executive green cognition on corporate economic and environmental performance, as well as the different mediating roles of green technology innovation ability in it. This proved that executive green cognition can positively promote corporate economic and environmental performance; Wu Fan (2022) used ESG ratings of A-share listed companies in China from 2015 to 2020 as a research sample, and found that overconfidence in management significantly reduces ESG investment, thereby reducing ESG performance. From this, it can be seen that the characteristics of managers can have certain economic consequences for the enterprise. The green awareness of executives can, on the one hand, improve the environmental performance of enterprises, which may have an impact on their ESG scores; On the other hand, managers' green awareness can improve the economic performance of enterprises, allowing them to have more sufficient funds and confidence to invest in environmental responsibility and assume corresponding responsibilities. Therefore, this article proposes the following assumptions:

H1: Executive green awareness can enhance ESG performance of enterprises.

3. Research Design

3.1. Sample Selection and Data Sources

This article takes listed A-share companies as the object and selects data from 2011 to 2021, excluding companies that have been delisted, listed for less than a year, or ceased to be listed. The green cognition data of managers comes from analyzing the annual report text of listed companies, while the ESG data is based on Bloomberg ESG rating data, and the control variable data is from the CSMAR database. To eliminate the impact of extreme values on the regression results, this article adopts Winsorize tail reduction at the 1% and 99% levels on the sample data, while removing missing values, resulting in a total of 8737 sample data.

In order to explore hypothesis 1, this article establishes the following models, where model (1) is used to explore the impact of executive green cognition (EPG) on corporate ESG performance, and model (2), (3), and (4) is used to further explore the role of executive green cognition (EPG) on ESG sub items.

$$ESG_{it} = \beta_0 + \beta_1 EPG_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 ROE_{it} + \beta_6 ATO_{it} + \beta_7 Cashflow_{it} + \beta_8 Board_{it} + \beta_9 BM_{it} + \beta_{10} TobinQ_{it} + \beta_{11} SOE_{it} + \beta_{12} Mshare_{it} + \beta_{13} Mfee_{it} + \varepsilon_{it} (1)$$

$$E_{it} = \beta_0 + \beta_1 EPG_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 ROE_{it} + \beta_6 ATO_{it} + \beta_7 Cashflow_{it} + \beta_8 Board_{it} + \beta_9 BM_{it} + \beta_{10} TobinQ_{it} + \beta_{11} SOE_{it} + \beta_{12} Mshare_{it} + \beta_{13} Mfee_{it} + \varepsilon_{it} (2)$$

$$S_{it} = \beta_0 + \beta_1 EPG_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 ROE_{it} + \beta_6 ATO_{it} + \beta_7 Cashflow_{it} + \beta_8 Board_{it} + \beta_9 BM_{it} + \beta_{10} TobinQ_{it} + \beta_{11} SOE_{it} + \beta_{12} Mshare_{it} + \beta_{13} Mfee_{it} + \varepsilon_{it} (3)$$

$$G_{it} = \beta_0 + \beta_1 EPG_{it} + \beta_2 Size_{it} + \beta_3 Lev_{it} + \beta_4 ROA_{it} + \beta_5 ROE_{it} + \beta_6 ATO_{it} + \beta_7 Cashflow_{it} + \beta_8 Board_{it} + \beta_9 BM_{it} + \beta_{10} TobinQ_{it} + \beta_{11} SOE_{it} + \beta_{12} Mshare_{it} + \beta_{13} Mfee_{it} + \varepsilon_{it} \quad (4)$$

Among them, ESG is Bloomberg ESG rating data, and E, S, and G are sub indicators of Bloomberg ESG rating data, representing corporate environmental performance, fulfilling social responsibility, and internal governance status. EPG stands for executive green cognition, indicating the frequency of keywords used to measure executive green cognition in the annual reports of listed companies. The rest are control variables, and the specific meanings of the variables are shown in Table 2.

Table 1: Variable Definition

variable type	variable name	variable symbol	variable meaning
The dependent variable	ESG score	ESG	Bloomberg's total score for environmental, social, and governance
	ESG sub indicator "E"	E	environmental performance
	ESG sub indicator "S"	S	Social responsibility fulfillment status
	ESG sub indicator "G"	G	Internal governance status
Explanatory variables	EPG	Executive green awareness	The frequency of keywords used to measure executive green cognition in the annual reports of listed companies
Control variable	company size	Size	Natural logarithm of total assets
	Asset liability ratio	Lev	total assets/total liabilities
	Net profit margin of total assets	ROA	net profit/total assets
	Return on equity	ROE	net profit/average net assets
	Total asset turnover rate	ATO	turnover/total assets
	Cash flow ratio	Cashflow	net cash flow/ending Current liability
	Number of directors	Board	The number of directors is taken as Natural logarithm
	Book to Market Ratio	BM	Book value/total market value
	Tobin Q value	TobinQ	(Value of circulating stock market+number of non Shares outstanding × Net assets per share+carrying amount of liabilities)/total assets
	Is it a state-owned enterprise	SOE	The value of state-owned holding enterprises is 1, while others are 0
	Management shareholding ratio	Mshare	number of shares held by management/total number of share capital
	Management fee rate	Mfee	Management expenses/operating income

4. Empirical Testing

4.1. Descriptive Statistics

The data used in the experiment is shown in Table 2, which includes mean, standard deviation, maximum and minimum values. It can be seen that the maximum ESG score of enterprises is 68.917, and the minimum is 9.909, indicating a significant difference in ESG scores between enterprises. The average value is 28.486, indicating that the ESG score of the enterprise still needs to be improved. The average frequency of keywords in the measurement dimension of executive green cognition in the annual reports of listed companies is 2.973, with a minimum value of 0 and a maximum value of 66, indicating that the level of green cognition among corporate executives is generally low. The other control variables are consistent with the data from the same type of literature.

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min	Max
ESG	8737	28.486	8.967	9.909	68.917
E	8737	9.276	12.567	0	73.815
S	8737	12.447	7.136	0	54.386
G	8737	64.029	13.809	27.273	96.117
EPG	8737	2.973	5.033	0	66
Size	8737	23.189	1.296	19.716	26.43
Lev	8737	.472	.2	.031	.925
ROA	8737	.051	.065	-.398	.254
ROE	8737	.087	.131	-1.072	.406
ATO	8737	.67	.458	.053	2.902
Cashflow	8737	.059	.069	-.2	.257
Board	8737	2.171	.202	1.609	2.708
BM	8737	1.41	1.595	.051	10.142
TobinQ	8737	2.054	1.503	.802	17.729
SOE	8737	.455	.498	0	1
Mshare	8737	.083	.16	0	.708
Mfee	8737	.077	.065	.007	.766

4.2. Regression Results

The regression results are shown in Table 3, and column (1) displays the regression results of model (1). We can find that there is a significant positive correlation between EPG (executive green cognition) and corporate ESG performance at a level of 0.01, with a coefficient of 0.062. This indicates that the higher the level of green cognition of corporate executives, the better their ESG rating performance, confirming hypothesis 1. Columns (2), (3), and (4) represent the regression results of EPG on ESG sub indicators E (environmental performance), S (social responsibility fulfillment status), and G (internal governance status). The coefficient of regression between executive green cognition and E (environmental performance) is 0.159, which is significant at the 0.01 level, indicating that executive green cognition can significantly

improve the environmental responsibility performance of enterprises. Similarly, as shown in column (4), EPG can also significantly improve the internal governance status of enterprises. In contrast, the role of green awareness among executives in fulfilling corporate social responsibility is not significant.

Table 3: Regression Results

	(1) ESG	(2) E	(3) S	(4) G
EPG	0.062*** (0.014)	0.159*** (0.024)	-0.003 (0.016)	0.045** (0.020)
Size	3.007*** (0.078)	4.209*** (0.135)	2.087*** (0.086)	2.266*** (0.108)
Lev	-4.519*** (0.504)	-6.657*** (0.873)	-5.572*** (0.556)	-3.204*** (0.699)
ROA	-9.030*** (2.789)	-19.543*** (4.832)	-8.501*** (3.079)	-1.076 (3.866)
ROE	3.742*** (1.188)	8.268*** (2.058)	3.478*** (1.311)	-0.252 (1.646)
ATO	1.546*** (0.177)	2.087*** (0.307)	1.117*** (0.195)	1.261*** (0.245)
Cashflow	3.146*** (1.124)	3.903** (1.947)	0.210 (1.241)	3.588** (1.558)
Board	0.642* (0.339)	0.403 (0.587)	0.265 (0.374)	0.995** (0.470)
BM	-0.109* (0.063)	-0.228** (0.109)	0.049 (0.069)	0.111 (0.087)
TobinQ	0.296*** (0.055)	0.459*** (0.096)	0.122** (0.061)	0.196** (0.077)
SOE	-0.018 (0.156)	-0.474* (0.270)	0.269 (0.172)	-0.057 (0.216)
Mshare	1.313*** (0.469)	3.048*** (0.812)	3.522*** (0.517)	-0.116 (0.649)
Mfee	5.891*** (1.277)	5.674** (2.212)	3.911*** (1.409)	7.160*** (1.769)
_cons	-49.356*** (1.850)	-92.177*** (3.206)	-38.338*** (2.043)	-5.331** (2.565)
N	8737.000	8737.000	8737.000	8737.000
r2	0.564	0.334	0.161	0.647
r2_a	0.562	0.330	0.157	0.645

Standard errors in parentheses

* p < 0.1, ** p < 0.05, *** p < 0.01

5. Conclusion Inspiration

In the current era of high-quality economic development in China, the ESG rating system is of great significance for enterprises to respond to high-quality development and implement sustainable development strategies. This article conducts regression analysis on a total of 8737

sample data of A-share listed companies from 2011 to 2021, and finds that corporate executives' green cognition can significantly improve the ESG rating performance of enterprises, and this promotion effect mainly affects the environmental performance and internal governance status in the ESG rating system. In summary, the characteristics of enterprise managers can have significant economic consequences for the enterprise. Therefore, enterprises should strengthen the learning and training of managers to enhance their green awareness level, which not only responds to the national call but also improves the ESG performance of the enterprise. In addition, when recruiting managers, enterprises should not only test their abilities, but also pay more attention to their personality traits and choose management personnel that are more suitable for the enterprise.

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