

Does Executives' Early Pollution Experience Improve the ESG Performance of Enterprises

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Abstract. With corporate sustainable development strategy, improving environmental performance can promote corporate prosperity. Early growth experience affects executives' behavior characteristics and then corporate green development decisions. As for corporate ESG performance, many scholars focus on the relationship between ESG and economic benefits with little research on the strategic driving factors of ESG. Taking Shanghai and Shenzhen A-share listed companies from 2007 to 2022 as samples, this paper analyzes the influence of executives' early pollution experience on corporate ESG performance. It is found that it greatly improves corporate ESG performance. According to heterogeneity analysis, as for enterprises with greater executives' power or less local environmental regulation, executives' pollution experience has a more apparent promotion effect on ESG. Mechanism analysis shows that executives' early pollution experience promotes corporate ESG performance by enhancing competitive culture and green innovation ability.

Keywords: Executives' Early Pollution Experience; ESG; Behavioral Characteristics; Imprinting Theory.

1. Introduction

In recent years, with environmental problems caused by global warming being increasingly prominent, climate governance has been vital to transform the world's economic structure to promote the economic structure towards green transformation. From the perspective of sustainable development, ESG embodies the development concept that enterprises pursue the unity of economic value and social value (Li et al., 2021), which is a crucial indicator to measure corporate sustainable development. According to the *2030 Agenda for Sustainable Development*, development problems about society, economy and environment should be solved before 2030, and a set of development concepts considering environmental protection, social responsibility and corporate sustainable development should be improved.

Executives are decisive in formulating sustainable development strategy which varies because of different executives' personal characteristics. In corporate operation and management, their value tendencies reflect differences in environment, society and corporate governance. As for the environment, the early pollution experience promotes enterprises' green innovation ability and solves environmental problems by enhancing their awareness of environmental protection (Wang et al., 2021). As for society, the early pollution experience stimulates executives' prosocial psychology, enhances the investment in social welfare, and boosts their altruistic motivation (Xu & Ma, 2021). As for corporate governance, the early pollution experience makes executives prone to deciding, which boosts the homogeneity of executives' characteristics and reduces management contradictions (Westphal & Zajac, 1995).

From a psychological perspective, past experiences affect individual behavior (Main et al., 1985), especially early traumas affect the brain function of children and adolescents, thus changing their personal growth (De Young et al., 2011). Past traumatic experiences enhance awareness of risk aversion and enhance social responsibility (Dong et al., 2021; Feng & Johansson, 2018; Tan & Li, 2023). As the decision-maker of corporate management, the value tendency formed earlier will trigger behavior orientation when formulating the corporate sustainable development strategy in adulthood.

Based on the imprinting theory (Azoulay et al., 2017; Marquis & Tilcsik, 2013; Zhu et al., 2020), executives' early experiences affect their decision-making style during corporate governance by shaping thinking cognition and behavior patterns. It increases their awareness of environmental protection and social responsibility, thus optimizing ESG performance. On the one hand, childhood is key to developing the brain and character (Fuhrmann et al., 2015). Pollution experience affects the behavior pattern after growth through characteristics of environmental protection in the sensitive individual environment and enhances executives' environmental awareness during management and decision-making. On the other hand, early pollution experience aggravates aversions to environmental pollution risks (Du et al., 2023), thus emphasizing environmental protection and social responsibility for better ESG.

In this paper, how executives' early pollution experience affects corporate ESG performance is explained. The research has these contributions. Firstly, the existing literature is about external institutional requirements and internal innovation (He et al., 2023; Shu & Tan, 2023; Zhong et al., 2023), etc. Exploring the relationship between executives' early pollution experience and ESG performance from the perspective of behavioral psychology, this paper extends ESG driving factors. Secondly, the existing literature seldom explores the shaping of executives' environmental awareness from their early pollution experiences. Based on executives' early pollution experiences, this paper studies its effect on environmental governance and corporate green transformation strategy. Thirdly, as for the mechanism path, its influence on ESG performance is studied based on the intermediary of corporate competition culture and green innovation ability.

The rest of the paper will be framed as follows. The second part is the literature review and hypothesis. The third part is the research design. The fourth part is the analysis of empirical results. The last part is the conclusion and suggestion.

2. Literature Review and Hypotheses

According to upper echelon theory (Hambrick & Mason, 1984), corporate governance decisions vary for different executives' personal characteristics. To explore how executives' personal characteristics influence enterprises, many scholars conducted research on executives' various past experiences. Lai Li et al. (2016) discussed the impact of executives' military experience on corporate financing and business performance, which shows executives with military experience prefer high risks with more radical financing decisions, harming corporate business performance. Custódio and Metzger (2014) compared the correlation between executives' employment experience and corporate policies, which concluded executives with financial backgrounds tend to hold less cash and buy back stocks when formulating and implementing financial policies.

There are rich studies on the impact of ESG on financial performance with few discussions on ESG's driving factors. Much research on executives' military and overseas experience exists, but the research on their childhood experience is lacking, especially the research on their early pollution experience. Hence, this paper aims at executives' early pollution experience and analyzes its impact on ESG performance during business operations, enriching related research to a certain extent.

(1) Executives' Early Pollution Experience and Corporate ESG Performance

Early pollution experience improves corporate environmental performance and social responsibility from executives' psychological cognition and corporate development strategy by affecting their choices in management and decision-making, so as to promote corporate ESG performance.

As for executive psychological cognition, negative experiences may enhance personal empathy and control desire, forming optimistic self-concern (Greenberg et al., 1996; Pennebaker & Keough, 1999), enhancing the meaning of personal life through positive life improvement (Ryff & Singer, 1998). Residence environmental pollution increases individuals' sensitivity to environmental pollution, resulting in a behavioral tendency to protect the environment (Bullinger, 1989; Zeidner & Shechter, 1988). Based on the imprinting theory (Azoulay et al., 2017; Marquis & Tilcsik, 2013), the early

pollution experience was stimulated by environmental factors, and the psychological resilience was externally manifested as individual prosocial behavior (Ungar, 2013), thus enhancing environmental awareness and social responsibility. By affecting the corporate environmental performance (Zameer et al., 2021), executives' environmental awareness improves the ESG performance and promotes corporate sustainable development.

As for the corporate development strategy, emotional regulation affects executives' behavioral motivation (Tamir, 2016) and then corporate strategic decisions. The early pollution experience makes executives more sensitive to environmental pollution (He et al, 2021) and more conservative in environmental risk management (Fiedler, 2001), thus making them adjust environmental protection policies based on characteristics of environmental changes. Besides, the early pollution experience enhances their awareness of environmental protection and ensures corporate sustainable development by affecting corporate resource allocation and promoting environmental protection policies and environmental performance (Tan et al, 2022).

On this basis, Hypothesis 1 is put forward:

H1: Executives' early pollution experience improves corporate ESG performance

(2) Executives' Early Pollution Experience, Competition Culture and Corporate ESG Performance

Corporate ESG performance is key to enterprise competition. Competition culture orientation enhances corporate demands to improve competitive advantages and sustainable development in achieving sustainable profit growth and reducing operating costs. As for sustainable profit growth, to maintain the competitive advantage, enterprises use environmental benefits for economic value and profit growth by improving environmental performance, thus boosting corporate ESG performance (Yadav et al., 2017). As for reducing operating costs, lower costs are basic to gain a competitive advantage. Good ESG performance boosts investment willingness and cuts financing costs, alleviating financing constraints and enhancing enterprise value (Houston & Shan, 2022; Fang & Hu, 2023).

As for sustainable development, executives' early pollution experience helps corporate green economy development and promotes competition culture to ESG performance from executives' leadership and corporate competitive advantage. As for their leadership, their early pollution experience promotes the corporate competition culture by shaping their ambition and enhancing their sense of goal (Bennis & Thomas, 2002), thus boosting corporate ESG performance and meeting the needs of corporate sustainable development. As for corporate competitive advantage, their environmental awareness affected by the early pollution experience strengthens corporate competitive advantage by consolidating internal resource management, thus improving environmental and ESG performance (Cao et al., 2022; Tan et al., 2022).

Based on the above analysis, this paper proposes Hypothesis 2:

H2: Executives' early pollution experience improves ESG performance by stimulating the corporate competitive culture.

(3) Executives' Early Pollution Experience, Green Innovation Ability and Corporate ESG Performance

By improving the environment, society and corporate governance, the corporate green innovation capability boosts corporate performance, broadens corporate sustainable development and promotes ESG performance. As for the environment, the macro-objective sustainable development has made enterprises environmentally friendly (Banerjee, 2002; Huang & Li, 2017); green innovation capability empowers the corporate environmental performance and enhances green management (Zheng et al, 2023). As for society, enterprises build a good reputation and enhance corporate social images by improving green innovation ability and corporate social responsibility, and then solving environmental problems (Hillestad et al., 2010). As for corporate governance, green innovation

enhances corporate value with substitution effects on information disclosure during corporate governance (Zhang et al., 2020).

Green innovation is vital to sustainable development. Executives' early pollution experience may shape their higher environmental awareness, make them emphasize energy conservation and emission reduction in the corporate innovation strategy, and promote ESG by independently improving green innovation capability. Their awareness of environmental protection can promote the corporate green innovation ability during knowledge acquisition (Polas et al., 2023). The advantages of green innovation, such as improving production efficiency and saving costs, improve the corporate green reputation and competition barriers, and then greatly enhance the corporate environmental performance. Based on the entrepreneurial disadvantage theory, the early pollution experience helps executives tackle environmental problems innovatively (Cheng et al., 2021; Miller & Le Breton, 2017), which will improve corporate green innovation ability.

Based on the above analysis, this paper proposes Hypothesis 3:

H3: Executives' early pollution experience improves ESG performance by improving the corporate green innovation capability.

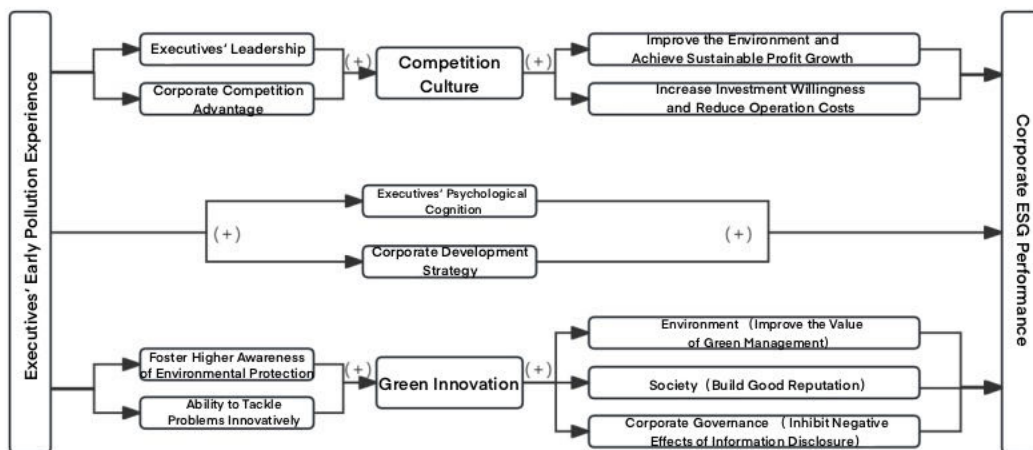


Figure 1. Influence Mechanism of Executives' Early Pollution Experience

3. Research Design

(1) Sample Selection and Data Processing

This paper takes Shanghai and Shenzhen A-share listed companies as samples from 2007 to 2022 to study the relationship between executives' early pollution experience and ESG performance. The initial sample financial data and executives' personal data are from CSMAR and CNRDS databases, with ESG rating data from ESG performance ratings from Bloomberg. To ensure reliability and stability, the initial data are collected as follows. (1) Eliminate the sample enterprises of ST, * ST and PT; (2) Eliminate the sample enterprises in the financial industry; (3) Eliminate sample enterprises in underdeveloped areas; (4) Eliminate sample enterprises with missing key data; (5) The continuous variables are treated with 1% tail reduction. Finally, there are 3531 valid samples of individual annual observations in this paper.

(2) Definition of Variables

1. Explained Variable

ESG: Considering rating methods and timeliness, this paper refers to Wang Yiqiu (Wang & Xie, 2022) and Wang Pei (Wang et al., 2021) with data from Bloomberg to measure the corporate ESG performance.

2. Explanatory Variable

Executives' early pollution experience (PollutExp): According to He Xin et al. (2021), Zheng Siqi et al. (2013), Qi Yu et al. (2015), this paper takes the annual smog days in administrative areas where executives were born during their 5-15 years old.

3. Control Variables

Based on the existing literature (Custódio & Metzger, 2014b; Herrmann & Datta, 2006; Le & Kroll, 2017), this paper controls influencing factors of ESG performance from aspects of enterprise and executive characteristics, taking return on assets, asset-liability ratio, enterprise scale, CEO duality, board size, enterprise nature, executive gender and executive tenure as control variables.

4. Mediating Variables

According to Xie Chenxin et al. (2022) and the word frequency obtained from the text analysis of the annual report of listed companies, the natural logarithm is taken as the measurement index of corporate competition culture (Culture_Com). According to Deng Yuping et al. (2021), the number of green invention patent applications is the measurement index of corporate green innovation capability (gre).

The main variable definitions in this paper are shown in Table 1.

Table 1. Definition of Main Variables

| Property | Names | Symbols | Definition |
|----------------------|--|-------------|--|
| Explained Variable | Corporate ESG performance | ESG | ESG performance ratings of listed companies from Bloomberg |
| Explanatory Variable | Executives' Early Pollution Experience | PollutExp | During 5-15 years old, cumulative annual smog days in the administrative area of executives' birthplace to the proportion of observation days in the current year for 10 consecutive years |
| Control Variable | Return on Assets | roa | (Total Profit+Interest Expense)/ Average Total Assets×100% |
| | Asset-Liability Ratio | lev | Total Liabilities/Assets of Enterprises |
| | Enterprise Scale | size | Natural logarithm of total assets at the end of the year |
| | CEO Duality | duality | If the chairman and general manager are concurrently held by one person, it's 1, otherwise it is 0 |
| | Board Size | board | Natural logarithm of the total number of the board of directors |
| | Nature of Enterprise | soe | If the nature of enterprise equity is state-owned, taking 1, otherwise it is 0 |
| | Executive Gender | mgt_gender | If the executive is male, it's 1, otherwise, it's 0 |
| Mediating Variable | Executive Tenure | tenure | Tenure of executives |
| | Corporate Competition Culture | Culture_Com | Natural logarithm of word frequency from text analysis of annual reports of listed companies |
| | Corporate Green Innovation Ability | gre | Number of green invention patent applications |

(3) Model Construction

Model (1) is built to test H1. When α significantly positive, H1 is verified.

$$ESG_{i,t} = \alpha_0 + \alpha_1 PollutExp_{i,t} + \sum Controls + \sum Firm + \sum Year + \varepsilon_1 \quad (1)$$

In equation (1), the explained variable is corporate ESG performance, the explanatory variable is executives' early pollution experience, and *Controls* is a group of control variables, ε is a random error term and α is the regression coefficient of variables. To absorb the related fixed effect, this paper follows the bidirectional panel fixed effect model and controls the time and enterprise to test.

To correct heteroscedasticity and correlation interference, clustering robust standard error is added to the regression test.

4. Analysis of Empirical Results

(1) Analysis of Benchmark Regression Results

According to Table 2. The impact coefficient of executives' pollution experience on ESG performance is 1.3046 at the significance level of 5%, indicating that it's helpful to improve corporate performance in environmental, social and corporate governance, thus improving ESG performance. This conclusion verifies H1.

Table 2. Influence of Executives' Early Pollution Experience on Corporate ESG Performance

| | |
|------------|------------|
| | (1) |
| | ESG |
| PollutExp | 1.3046** |
| | (2.34) |
| roa | 3.1179* |
| | (1.71) |
| lev | -3.0149*** |
| | (-3.20) |
| size | 1.5418*** |
| | (4.61) |
| duality | 0.7148** |
| | (2.00) |
| board | 0.9856** |
| | (2.20) |
| soe | -1.6629** |
| | (-2.14) |
| mgt_gender | -0.9381** |
| | (-2.20) |
| tenure | -0.0027 |
| | (-1.11) |
| Firm Fe | YES |
| Year Fe | YES |
| N | 3387 |
| adj. R^2 | 0.8568 |

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively. The value of t is in parentheses.

(2) Analysis of Impact Mechanism

1. Corporate Competition Culture

This paper analyzes the internal intermediary mechanism of executives' early pollution experience to improve ESG performance. According to Table 3, the influence coefficient of executives' early pollution experience on corporate competitive culture is 0.1351, which is significant at the level of 10%. After including intermediary variables, regression results in Column (3) of Table 3 show its influence coefficient on ESG performance is 1.1165, passing the significance test at the level of 5%. Hence, executives' early pollution experience can strengthen the corporate competitive culture orientation and improve corporate ESG performance based on a sustainable development strategy. H2 is thus supported by empirical results.

Table 3. Test Results of Intermediary Effect of Corporate Competitive Culture

| | (1) | (2) | (3) |
|-------------|----------|-------------|----------|
| | ESG | Culture_Com | ESG |
| PollutExp | 1.3046** | 0.1351* | 1.1165** |
| | (2.34) | (1.68) | (1.99) |
| Culture_Com | | | 0.5052** |
| | | | (2.06) |
| Controls | YES | YES | YES |
| Firm Fe | YES | YES | YES |
| Year Fe | YES | YES | YES |
| N | 3387 | 3355 | 3355 |
| adj. R^2 | 0.8568 | 0.7081 | 0.8564 |

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively. The value of t is in parentheses.

2. Corporate Green Innovation Ability

Table 4. Test Results of Intermediary Effect of Corporate Green Innovation Ability

| | (1) | (2) | (3) |
|------------|----------|----------|-----------|
| | ESG | gre | ESG |
| PollutExp | 1.3046** | 0.1923** | 1.2301** |
| | (2.34) | (2.05) | (2.21) |
| gre | | | 0.3874*** |
| Controls | YES | YES | YES |
| Firm Fe | YES | YES | YES |
| Year Fe | YES | YES | YES |
| N | 3387 | 3387 | 3387 |
| adj. R^2 | 0.8568 | 0.7703 | 0.8576 |

Note: ***, ** and * represent the significance level of 1%, 5% and 10% respectively. The value of t is in parentheses.

This paper examines the intermediary mechanism of corporate green innovation capability between executives' early pollution experience and ESG performance. Table 4 show that the impact coefficient of executives' early pollution experience on corporate competitive culture is 0.1923, which is significant at the level of 5%. After adding mediating variables, the regression results in Column (3) of Table 4 shows that the influence coefficient of executives' early pollution experience

on corporate ESG performance is 1.2301, which is still significant at the level of 5%. Hence, it can improve the corporate green innovation ability, and promote the transformation of the green economy, thus promoting the corporate ESG performance and verifying H3.

(3) Heterogeneity Analysis

Based on the corporate life cycle, executive power and local environmental regulation, this paper regresses samples in groups. According to Table 5, executives' pollution experience can improve the ESG performance of mature enterprises with greater executives' power and less environmental regulation in their regions.

Table 5. Results of Heterogeneity Test

| | ESG | ESG | ESG |
|------------|-----------------------------------|----------------------------------|--------------|
| | (1) Growth Period | (2) Recession | (3) Maturity |
| PollutExp | 0.7336 | 1.1737 | 1.3795* |
| | (0.70) | (1.27) | (1.95) |
| N | 800 | 566 | 1662 |
| adj. R^2 | 0.8804 | 0.8735 | 0.8669 |
| | (1) Executives have greater power | (2) Executives have less power | |
| PollutExp | 1.4510** | 0.6906 | |
| | (2.11) | (0.74) | |
| N | 1646 | 1634 | |
| adj. R^2 | 0.8667 | 0.8506 | |
| | (1) High environmental regulation | (2) Low environmental regulation | |
| PollutExp | 0.9245 | 1.7291** | |
| | (1.63) | (2.06) | |
| N | 1664 | 1532 | |
| adj. R^2 | 0.8610 | 0.8583 | |

(4) Robustness Test

After removing the influence of special events and the placebo test, the test results show that the promotion effect of executives' early pollution experience on corporate ESG performance is still valid.

5. Conclusion and Suggestions

Taking Shanghai and Shenzhen A-share listed companies from 2007 to 2022 as samples, this paper analyzes the impact of executives' early pollution experience on ESG performance based on imprinting theory. Firstly, it can improve the corporate ESG performance, which is valid after robustness tests. Secondly, this impact varies among enterprises with various life cycles, executives' power and local environmental regulation. Specifically, for mature enterprises with greater executives' power and lower local environmental regulation, executives' pollution experience can improve corporate ESG performance. Thirdly, its promotion of corporate ESG performance is realized by enhancing corporate competitive culture and green innovation ability.

This paper proposes some suggestions. Firstly, adjust and improve the system of selecting and hiring executives, consider executives' early experiences, utilize the subjective initiative of their decision-making, and promote the construction of executives and human resource management. Secondly, encourage mature enterprises to fulfill social responsibilities, fully take advantage of executives' power, strengthen environmental risk management, reduce the conflict between economic interests

and social interests, utilize early pollution experience in corporate ESG performance, and promote the implementation of corporate sustainable development strategy. Thirdly, trying different environmental protection policies for various enterprises in the region can reduce the mandatory requirements with low environmental regulation in the region, enhance the spontaneous awareness of environmental protection and social responsibility of executives, and give full play to the positive effect of executives' early pollution experience in improving corporate ESG performance.

These conclusions provide empirical evidence for the relationship between executives' early pollution experience and corporate ESG performance, enriching the literature on ESG driving factors in existing studies from the perspective of behavioral psychology. In this paper, the personal characteristics of executives are from the CSMAR database. Due to incomplete information disclosure, the sample size is small. Hence, follow-up research should be conducted through interviews and other research methods for more comprehensive data samples.

References

- [1] Azoulay, P., Liu, C. C., & Stuart, T. E. (2017). Social Influence Given (Partially) Deliberate Matching: Career Imprints in the Creation of Academic Entrepreneurs. *American Journal of Sociology*, 122(4), 1223-1271. doi:10.1086/689890.
- [2] Banerjee, S. B. (2002). Corporate environmentalism: The construct and its measurement. *Journal of Business Research*, 55(3), 177-191.
- [3] Bennis, W. G., & Thomas, R. J. (2002). Crucibles of leadership. *Harvard Business Review*, 80.
- [4] Bullinger, M. (1989). Psychological effects of air pollution on healthy residents--a time-series approach. *Journal of Environmental Psychology*, 9(2), 103-118.
- [5] Cao, C., Tong, X., Chen, Y., & Zhang, Y. (2022). How top management's environmental awareness affect corporate green competitive advantage: evidence from China. *Kybernetes*, 51(3), 1250-1279.
- [6] Cheng, Z., Guo, W., Hayward, M., Smyth, R., & Wang, H. (2021). Childhood adversity and the propensity for entrepreneurship: A quasi-experimental study of the Great Chinese Famine. *Journal of Business Venturing*, 36(1).
- [7] Custódio, C., & Metzger, D. (2014a). Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics*, 114(1), 125-154.
- [8] Custódio, C., & Metzger, D. (2014b). Financial expert CEOs: CEO's work experience and firm's financial policies. *Journal of Financial Economics*, 114(1), 125-154.
- [9] De Young, A. C., Kenardy, J. A., & Cobham, V. E. (2011). Trauma in early childhood: A neglected population. *Clinical Child and Family Psychology Review*, 14, 231-250.
- [10] Dong, C., Xu, R., & Xu, L. (2021). Relationship of childhood trauma, psychological resilience, and family resilience among undergraduate nursing students: A cross-sectional study. *Perspectives in Psychiatric Care*, 57(2), 852-859.
- [11] Feng, X., & Johansson, A. C. (2018). Living through the Great Chinese Famine: Early-life experiences and managerial decisions. *Journal of Corporate Finance*, 48, 638-657.
- [12] Fiedler, K. (2001). Affective influences on social information processing.
- [13] Fuhrmann, D. et al. (2015). Adolescence as a Sensitive Period of Brain Development. *Trends in Cognitive Sciences*, 19(10), 558-566. doi: 10.1016/j.tics.2015.07.008.
- [14] Greenberg, M. A., Wortman, C. B., & Stone, A. A. (1996). Emotional expression and physical health: Revising traumatic memories or fostering self-regulation? *Journal of Personality and Social Psychology*, 71(3), 588.
- [15] Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers. *Academy of Management Review*, 9(2), 193-206.
- [16] He, Y. et al. (2023). How does the environmental protection tax law affect firm ESG? Evidence from the Chinese stock markets. *Energy Economics*, 127, 107067.
- [17] Herrmann, P., & Datta, D. K. (2006). CEO experiences: Effects on the choice of FDI entry mode. *Journal of Management Studies*, 43(4), 755-778.
- [18] Hillestad, T., Xie, C., & Haugland, S. A. (2010). Innovative corporate social responsibility: the founder's role in creating a trustworthy corporate brand through "green innovation". *Journal of Product & Brand Management*, 19(6), 440-451.
- [19] Houston, J. F., & Shan, H. (2022). Corporate ESG profiles and banking relationships. *The Review of Financial Studies*, 35(7), 3373-3417.
- [20] Huang, J. W., & Li, Y. H. (2017). Green innovation and performance: The view of organizational capability and social reciprocity. *Journal of Business Ethics*, 145, 309-324.

- [21] Le, S., & Kroll, M. (2017). CEO international experience: Effects on strategic change and firm performance. *Journal of International Business Studies*, 48(5), 573-595. Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, 66-104.
- [22] Marquis, C., & Tilcsik, A. (2013). Imprinting: Toward a multilevel theory. *The Academy of Management Annals*, 7(1), 195-245. doi:10.5465/19416520.2013.766076.
- [23] Miller, D., & Le Breton-Miller, I. (2017). Underdog entrepreneurs: A model of challenge-based entrepreneurship. *Entrepreneurship Theory and Practice*, 41(1), 7-17. Pennebaker, J. W., & Keough, K. A. (1999). Revealing, organizing, and reorganizing the self in response to stress and emotion.
- [24] Polas, M. R. H. et al. (2023). Knowledge management practices and green innovation in SMES: the role of environmental awareness towards environmental sustainability. *International Journal of Organizational Analysis*, 31(5), 1601-1622.
- [25] Ryff, C. D., & Singer, B. (1998). The contours of positive human health. *Psychological inquiry*, 9(1), 1-28.
- [26] Shu, H., & Tan, W. (2023). Does carbon control policy risk affect corporate ESG performance? *Economic Modelling*, 120, 106148.
- [27] Tamir, M. (2016). Why do people regulate their emotions? A taxonomy of motives in emotion regulation. *Personality and Social Psychology Review*, 20(3), 199-222.
- [28] Tan, K., Siddik, A. B., Sobhani, F. A., Hamayun, M., & Masukujjaman, M. (2022). Do environmental strategy and awareness improve firms' environmental and financial performance? The role of competitive advantage. *Sustainability*, 14(17), 10600.
- [29] Ungar, M. (2013). Resilience, trauma, context, and culture. *Trauma, Violence, & Abuse*, 14(3), 255-266. doi: 10.1177/1524838013487805.
- [30] Wang, Y., Shen, T., Chen, Y., & Carmeli, A. (2021). CEO environmentally responsible leadership and firm environmental innovation: A socio-psychological perspective. *Journal of Business Research*, 126, 327-340. doi: 10.1016/j.jbusres.2021.01.004.
- [31] Westphal, J. D., & Zajac, E. J. (1995). Who shall govern? CEO/board power, demographic similarity, and new director selection. *Administrative Science Quarterly*, 40(1). doi:10.2307/2393700.
- [32] Xu, S., & Ma, P. (2021). CEOs' Poverty experience and corporate social responsibility: Are CEOs who have experienced poverty more generous? *Journal of Business Ethics*, 180(2), 747-776. doi:10.1007/s10551-021-04899-w.
- [33] Yadav, P. L. et al. (2017). Sustaining competitive advantage through corporate environmental performance. *Business Strategy and the Environment*, 26(3), 345-357.
- [34] Zameer, H., Wang, Y., & Saeed, M. R. (2021). Net-zero emission targets and the role of managerial environmental awareness, customer pressure, and regulatory control toward environmental performance. *Business Strategy and the Environment*, 30(8), 4223-4236.
- [35] Zeidner, M., & Shechter, M. (1988). Psychological responses to air pollution: Some personality and demographic correlates. *Journal of Environmental Psychology*, 8(3), 191-208.
- [36] Zhang, F., Qin, X., & Liu, L. (2020). The interaction effect between ESG and green innovation and its impact on firm value from the perspective of information disclosure. *Sustainability*, 12(5), 1866.
- [37] Zheng, J., Khurram, M. U., & Chen, L. (2022). Can green innovation affect ESG ratings and financial performance? evidence from Chinese GEM listed companies. *Sustainability*, 14(14), 8677.
- [38] Zhong, Y., Zhao, H., & Yin, T. (2023). Resource bundling: How does enterprise digital transformation affect enterprise ESG development? *Sustainability*, 15(2), 1319.
- [39] Deng, Y. P. et al. (2021). Does environmental regulation promote green innovation capability? Evidence from China. *Statistical Research*, 38(07), 76-86.
- [40] Du, X. Q., Xiao, L., & Lin, Q. (2023). Born in drought and saving against a rainy day: Does CEO's childhood drought experience improve corporate water protection performance? *Journal of Management Sciences in China*, 26(07), 106-132.
- [41] Fang, X. M., & Hu, D. (2023). Corporate ESG performance and innovation: Empirical evidence from A-share listed companies. *Economic Research Journal*, 58(02), 91-106.
- [42] He, X. et al. (2021). Environmental pollution in CEO's early living place and corporate strategic distinctiveness: From the perspective of affective trait. *Business and Management Journal*, 43(01), 89-105. doi:10.19616/j.cnki.bmj.2021.01.006.
- [43] Lai, L., Gong, Y. L., & Ma, Y. Q. (2016). Managers' military experience, financing preference and business performance. *Journal of Management World*, (08), 126-136. Li, J. L., Yang, Z., Chen, J., & Cui, W. Q. (2021). Study on the mechanism of ESG promoting corporate finance: Based on the perspective of corporate innovation. *Science of Science and Management of S.&T.*, 42(09), 71-89.

- [44] Qi, Y., & Lu, J. Y. (2015). Pollution, health and inequality--Crossing the trap of "environmental health poverty". *Journal of Management World*, (09), 32-51.
- [45] Tan, Q. M., & Li, S. N. (2023). Early poverty experience of board chair and targeted poverty alleviation: Empirical evidence from Chinese A-shared listed companies. *Journal of Systems & Management*, 32(01), 178-191.
- [46] Wang, P. et al. (2021). Study on the impact of environmental protection tax on enterprise's environmental, social and governance performance--Based on the mediation effect of green technology innovation. *Taxation Research*, (11), 50-56. Wang, Y. Q., & Xie, M. (2022). The impact of ESG information discourse on corporate financing costs: Based on the empirical evidence of listed companies in China. *Nankai Economic Studies*, (11), 75-94. doi: 10.14116/j.nkes.2022.11.005.
- [47] Xie, C. X. et al. (2022). Corporate competition culture and stock price crash risk. *Journal of Industrial Engineering and Engineering Management*, 36(01), 111-123.
- [48] Zheng, S. Q., Wan, G. H., Sun, W. Z., & Luo, D. L. (2013). Public appeal and urban environmental governance. *Journal of Management World*, (06), 72-84.