香港社會科學學報

HONG KONG JOURNAL OF SOCIAL SCIENCES

第66期 (2025年秋冬) **Vol. 66 Autumn/Winter 2025**

Available online at www.hkjoss.com

Research article https://doi.org/10.55463/hkjss.issn.1021-3619.66.1

Microfoundations of ESG Performance: Organizational Behavior, Incentive Contracts, and the Moderating Role of the Digital Political Economy

ESG绩效的微观基础：组织行为、激励契约与数字政治经济的调节作用

Pei Wang[1]*

[1] Jinan University-University of Birmingham Joint Institute,
Jinan University, Guangzhou, Guangdong Province, China, 510000

* Correspondence: m19860408879@163.com

Abstract:
Environmental, Social, and Governance (ESG) performance has become a core strategic concern for firms worldwide due to tightening regulatory pressures, evolving stakeholder expectations, and the urgency of sustainable development. This study investigates the microfoundations of ESG performance (ESGP) by examining how internal organizational behavior and incentive contracts shape ESG outcomes, and how these effects are conditioned by the external green/digital political economy. The empirical analysis relies on an unbalanced panel of 325 listed companies from multiple countries over the period 2020–2024. ESGP scores serve as the dependent variable, while indicators of organizational behavior and incentive contracts constitute the main explanatory variables. Using descriptive

Keywords:
ESG performance; organizational behavior; incentive contracts; green political economy; corporate governance; structural equation modeling (SEM).

关键词：
ESG绩效；组织行为；激励契约;
绿色政治经济；公司治理;
结构方程模型 (SEM).

statistics, multiple linear regression, and moderated regression within a fixed-effects framework, we estimate the impacts of internal drivers and their interaction with the green/digital policy context. The results show that incentive contracts exert a strong positive effect on ESGP ($\beta = 0.42$, $p < 0.01$), while organizational behavior has a moderately positive impact ($\beta = 0.28$, $p < 0.05$). Crucially, the interaction between incentive contracts and the green/digital index is also positive and significant ($\beta = 0.35$, $p < 0.01$), indicating a substantive moderating effect of the external political economy. The overall model fit suggests substantial explanatory power, underscoring that micro-level governance mechanisms yield stronger improvements in ESG outcomes when embedded in supportive green/digital regulatory environments. These findings imply that firms adopting structured incentive systems and participatory behavioral models are better positioned to enhance ESG performance, particularly in jurisdictions with robust green and digital policy frameworks.

Article History:

Received: **August 12, 2025**
Revised: **October 7, 2025**
Accepted: **October 23, 2025**
Published: **November 20, 2025**

摘 要：
在监管压力日益趋严、利益相关者期望不断演变以及可持续发展议程日益紧迫的背景下，环境、社会与公司治理（ESG）绩效已经成为全球企业面临的核心战略议题之。本文从微观基础视角出发，考察内部组织行为与激励契约如何共同塑造企业ESG绩效（ESGP），并分析外部绿色/数字政治经济环境对上述关系的调节效应。研究基于2020–2024年间来自多个国家的325家上市公司非平衡面板数据，将ESGP得分作为被解释变量，将组织行为指标与激励契约指标作为核心解释变量。方法上采用描述性统计分析、多元线性回归以及嵌入固定效应模型框架下的调节回归分析，以评估内部驱动因素及其与绿色/数字政策情境的交互影响。结果表明，激励契约对ESGP具有显著且较强的正向影响（$\beta = 0.42$，$p < 0.01$），组织行为对ESGP的影响则为中度正向显著（$\beta = 0.28$，$p < 0.05$）。更为关键的是，激励契约与绿色/数字指数的交互项同样呈显著正向影响（$\beta = 0.35$，$p < 0.01$），显示外部政治经济环境具有实质性的调节作用。模型拟合优度表明，本研究框架具有较高解释力，凸显出在友好绿色/数字监管环境下，微观层面的治理机制能够更有效地提升企业ESG绩效。研究结论启示，采纳结构化激励体系与参与式组织行为模式的公司，尤其是在绿色与数字政策框架较为健全的法域中，更有可能实现ESG绩效的持续改进。

1. Introduction

ESGP has emerged as a major component of corporate planning in the current age. Social justice, climate change, and corporate responsibility are some of the social issues currently identified as problems that are currently important to organizational legitimacy and long-term value creation, due to the global awareness of such issues in the form of the ESG factors [1, 2]. Consumers, employees, investors, and regulators have mounted pressure on businesses to act on their commitment to inclusive governance, ethical practices, and environmental sustainability in addition to financial performance [3]. The growing significance of ESG is also being cemented by international frameworks and multinational standards. The regulatory and normative environment, whether national climate regulations and digital transformation agendas or the Sustainable

Development Goals (SDGs), is pressuring companies to incorporate ESG concepts into their procedures [4]. This change has seen ESG reporting, rating systems, and sustainability disclosure all rise in synchronization as far as how companies are regarded in the global economy is concerned [5]. Figure 1 illustrates the primary factors influencing ESG performance globally, like sustainability aims, stakeholder demands, legal constraints, and rising social and environmental consciousness. The overview of the environment in which contemporary companies function.

Figure 1: Key Drivers of ESG Performance in the Global Business Context

Businesses are being asked to match their internal procedures with the external sustainability regulators in this changing environment [6]. Despite the sufficient perceptible evidence of external circumstances, such as the influence of investors and laws, the importance of internal factors in ESG effectiveness appears to grow. The ways that sustainability goals are interpreted and realized are all subject to the influences of leadership principles, corporate culture, and organizational behavior [7]. Similarly, incentive schemes linking the compensation of employees to sustainability goals can reinforce the integration of sustainable activities in day-to-day activities [8].

But the broader political economy, especially how the digital and environmental policies interact, creates different conditions under which businessmen undertake ESG goals. Probably, those countries that possess a more developed internet infrastructure and have more environmentally friendly regulatory policies can offer more favorable environments to businesses wishing to meet ESG standards [9]. Understanding whether internal corporate policies interact with these external factors is essential on the way towards grasping the real reasons behind ESGP in the current global economy [10]. The ability to coordinate the internal organizational practices within the context of different and changing external policies is a major obstacle to enhancing ESGP. The presence of inconsistencies in the form of ESG implementation is due to variations in the strength of legislation in different countries, variations in digital infrastructure, and variations in stakeholder demands. Moreover, the complexity of embedding ESG in business behavior and reward systems while continuing to pursue financial objectives is a tough and situational process.

The proposed research aims to analyze the role of internal firm characteristics within the framework of ESG and the effects on the total ESGP, including the contribution of employee behavior and the ESG-related incentives in the firm. It also explores the internal influences of national environments, such as environmental laws and the internet infrastructure, on this relationship. The aim is to have improved knowledge of the relationship between corporate strategies and external forces as a way of enhancing ESG outcomes in global organizations.

The analysis begins with a review of the available literature on the performance of ESG, organizational behavior, designs of incentives, and the impact of national policy environments. It then integrates firm-level data in order to test the effect of intra-firm drivers and the moderating effect of green/digital policies. Lastly, it presents important findings and concludes with recommendations towards corporate strategic and policy alignment on the improvement of ESG outcomes.

2. Literature Review

To comprehend the factors that drive the ESG effectiveness, it is important to examine both within the organization and at its broader policy environment in which companies operate. The existing research, discussed in the market, provided useful information regarding the impact of company behavior, incentive system, and external institutional setup on sustainable business conduct.

The experiment sought an association between the ESG practices and the financial prosperity of an information technology (IT) company [11]. The fixed and random effects Ordinary Least Squares (OLS) regression were applied to determine crucial sustainable development strategies using panel data of 43 companies (2004-2020). The result showed that social and environmental ratings lead to a significant enhancement of financial outcomes. Disadvantages, however, consisted of being focused on one industry and potential anomalies in the data in the time series.

Improved the Corporate Social Responsibility (CSR) and ESG reporting that were evaluated through the enhanced digital accounting systems, which were proposed in the research [12]. Case study and data analysis revealed that such technologies as blockchain, ERP, and AI make precision, timeliness, and transparency possible. Expensive costs, data safety risks, and company resistance limit adoption, emphasizing the need to eliminate these barriers to broader consequences.

An analysis of the data-driven technologies (including blockchain, IoT, sensors, and artificial intelligence) through enhanced ESG activities in terms of better performance evaluation, transparency, and monitoring was suggested in [13]. Through a conceptual framework, it investigated methods for efficiently utilizing ESG data. The outcomes show better risk minimization and decision-making. Limitations, however, included the possibility of AI abuse and the requirement for robust data governance to guarantee dependability and adherence.

Regression analysis was used in the research [14] to examine how ESG affects company financial performance using data from 3,332 multinational companies (2011–2020). A considerable positive correlation between ESG and corporate financial performance (CFP) has been shown, particularly in large enterprises and high-risk situations. Reputation, stakeholder trust, and sustainability were all enhanced by ESG. The findings support the incorporation of ESG for improved business performance and inform policy in industries that are environmentally sensitive. Table 1 illustrates the gathered important research on ESG performance in many situations, emphasizing the approaches, goals, main conclusions, and constraints.

Table 1: Summary of Related Research on ESG Performance and Influencing Factors

Method	**Aim**	**Outcome**	**Limitation**	**Reference**
Rough Stepwise Weight Assessment Ratio Analysis (R-SWARA) and Combined Compromise Solution (CoCoSo) techniques	Develop an open framework to evaluate Environmental, Social, and Governance (ESG) in commercial banks	Governance ranked as the most important ESG component, followed by social and environmental factors	Dependence on expert opinion might reduce generalizability	Karki et al. [15]
Descriptive and inductive statistics	Assess the influence of voluntary sustainability disclosures on business performance (ESG ratings of 510 firms in 17 nations, 2010–2018)	Governance improves efficiency; social issues hinder it; Global Reporting Initiative (GRI) reporting is linked to stronger market performance	Regional and industry variations; European firms dominate	Shaikh, [16]
Textual analysis with a word embedding-based integrity dictionary	Explore the link between corporate integrity culture and ESG Performance (ESGP) in Chinese A-listed firms	Integrity positively influences ESG directly and indirectly via green innovation	Context limited to Chinese firms; method specificity	Bao et al. [17]

Econometric models	Examine the relationship between Asian financial development and ESGP (2013–2017)	Positive correlation; financial development drives sustainability and green investment	Regional scope limited to Asia	Ng et al. [18]
Panel data analysis (2010–2022)	Study ESGP's influence on investment patterns in non-financial enterprises	Positive link with capital investment; negative link with conservation investment; corporate attributes play role	Trade-offs limit certain sustainability outcomes	Yu et al. [19]
Lewbel estimation & fixed effects regression	Analyze the impact of geopolitical conflicts on ESG performance in 79 countries	Conflicts significantly reduce ESG scores, especially in developed nations	Causality complexity; geopolitical variability	Saharti et al. [20]
Two-stage fixed effects model	Investigate ESGP's effect on Corporate Financial Performance (CFP) via innovation in Chinese A-share firms (2009–2021)	ESGP boosts CFP, especially in non-polluting, non-state-owned enterprises (SOEs); effect weakens under financial constraints	Focus limited to Chinese market	Xu et al. [21]
Survey (n=1285) & cross-sectional analysis	Assess the link between ESGP and green behaviors in Chinese e-commerce employees	ESGP has a direct and indirect positive impact through the green psychological climate	Self-report bias, convenience sampling, and limited generalizability	Wang and Hu [22]

2.1 Problem Statement

The reviewed studies exhibit several limitations that may affect the generalizability of their findings. Many rely heavily on expert judgment or subjective assessments, which can introduce bias and limit applicability beyond the research context. Geographic and industry-specific focuses, such as analyses centered on particular countries or sectors, restrict the ability to draw global conclusions. Methodological constraints, including self-reported data and specialized analytical techniques, may further skew results. Additionally, reliance on time-bound datasets can overlook evolving ESG trends and long-term impacts. These context-specific approaches make cross-country and cross-sector comparisons more challenging.

This research overcomes several limitations of prior ESG research by integrating both internal organizational factors and external policy conditions into a unified model, enabling a more comprehensive understanding of ESG performance drivers. By using cross-country panel data from multiple industries, it enhances generalizability beyond single-region or sector contexts. The inclusion of moderated regression reveals nuanced interaction effects often overlooked in earlier work. Additionally, the robust statistical approach and high explanatory power strengthen the reliability of findings, offering actionable insights for policymakers and corporate leaders.

2.2 Theoretical framework and hypothesis development

The research model has its theoretical foundation and uses well-established organizational, economic, and institutional theories to explain why it expects the correlations in the research to exist. The theories that will be investigated in the empirical research are then logically provided. Table 2 describes the research's theoretical foundations and connects the suggested hypotheses to important institutional and organizational concepts. It shows how ESGP is shaped by incentives, behavior, and policy environment factors.

Table 2: Theoretical Framework Linking Organizational Drivers and ESG Performance

Theory	Core Concept	Application in this research	Expected Impact
Agency Theory	Addresses conflicts between principals (owners) and agents (managers)	Incentive contracts align managerial interests with ESG goals, reducing agency problems	Incentive contracts → Positive effect on ESGP (H1)
Institutional Theory	The external environment of institutions affects businesses.	Strong green/digital political environments enhance the effectiveness of ESG-related incentive mechanisms	Green/Digital Political Economy moderates the incentive–ESG relationship (H3)
Stakeholder Theory	Firms should prioritize the best interests of all stakeholders, not just stockholders.	Internal organizational behavior (e.g., culture, ethics, participation) reflects stakeholder-oriented values.	Organizational behavior → Moderate positive effect on ESG (H2)

2.2.1 Hypothesis development

H1: Incentive contracts ⟶ for ESG performance.
ESG scores and incentive contracts have a statistically substantial positive correlation.

H2: Organizational behavior ⟶ ESG performance.
ESG scores and organizational behavior have a slightly positive association.

H3: Green/Digital Political Economy ⟶incentive contracts ⟶ESG performance.
A significant positive interaction effect, showing that the effect of incentives on ESG is stronger in countries with high Green/Digital Index scores.

Figure 2 depicts the conceptual diagram of how incentive contracts and organizational behavior directly improve ESG performance, whilst the green/digital political economy modifies and intensifies the influence of incentive contracts.

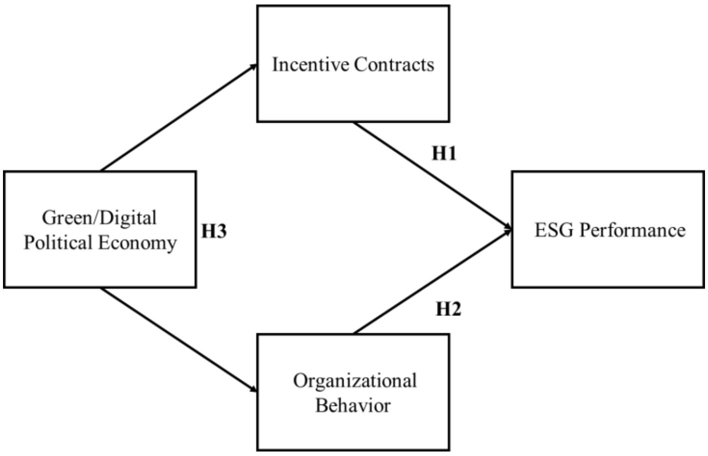

Figure 2: Conceptual framework for proposed research

3. Methodology

The analysis strategy, data sources, variables, and analytical methodologies used to examine the research hypotheses are discussed. By describing the procedures used for data collection, measurement, and analysis, it guarantees openness and repeatability. The approaches selected for assessing the relationships among organizational behavior, incentives, ESG performance, and moderating factors.

3.1 Research design and data collection

A quantitative research approach was used in this investigation, which included 325 publicly traded companies between 2020 and 2024. It focuses on assessing ESGP using incentive contract structures and internal organizational behavior, as well as the moderating impact of a Green/Digital Political Economy Index that was created. The dataset contains information on incentives, organizational behavior measures, and firm-level ESG ratings. Normalized components representing global green policy strength and digital development are used to create the moderator index. This method enables dynamic analysis across enterprises and time. Table 3 shows the demographic profile of the 325 firms that were examined, divided by firm size, ESGP range, industrial sector, and country income level.

Table 3: Demographic Characteristics of Sample Firms (2020–2024)

Characteristic	**Category**	**Frequency (N=325)**	**Percentage (%)**
Industry Sector	Manufacturing	95	29.2
	Financial Services	70	21.5
	Technology	60	18.5
	Energy and Utilities	45	13.8
	Consumer Goods	30	9.2
	Others	25	7.8
Country Income Level	Rich Nations	210	64.6
	Upper-Middle-Class Nations	85	26.2
	Lower-Middle-Class Nations	30	9.2
Firm Size (by Employees)	Small (≤ 500 employees)	90	27.7
	Medium (501–5000 employees)	140	43.1
	Large (> 5000 employees)	95	29.2
ESG Score Range	Low (0–39)	65	20.0
	Moderate (40–69)	175	53.8
	High (70–100)	85	26.2

3.2 Research questionnaire

Organizational behavior, incentive contracts, ESG performance, and the green/digital political economy are the research's fundamental factors, and each item on the research questionnaire is selected by comparing it with these variables. The purpose of each statement is to represent actual organizations' attitudes and behaviors. A 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) was utilized in the questionnaire to evaluate the influence of incentive contracts, organizational behavior, and external regulatory contexts on ESG performance, as shown in Table 4.

Table 4: Survey questionnaire for each variable

Variables	Item	Questionnaires
ESG Performance	1	The company has implemented measurable carbon reduction targets.
	2	It actively monitors and reports our environmental impact.
	3	Environmental sustainability is embedded in the core operations.
Organizational Behavior	1	Employees at all levels are encouraged to contribute ideas to improve ESG practices.
	3	Inter-departmental collaboration is encouraged for sustainability projects.
Incentive Contracts	1	There are financial incentives tied to achieving environmental or social targets.
	2	ESGP is a key factor in promotion and recognition decisions.
Green/Digital Political Economy	1	Digital infrastructure in the country supports innovation in ESG-related reporting.
	2	Regulatory frameworks in the country encourage corporate ESG compliance.

3.3 Data analysis

IBM SPSS version 29.0 was used in the analysis to perform statistical calculations. Key variables were summarized using descriptive statistics. While moderated regression using fixed-effects models looked at interaction effects, multiple linear regression evaluated direct effects. The conceptual model was validated using SEM, which also ensured measurement reliability and tested the hypothesized relationships between incentive contracts, organizational behavior, ESG performance, and the moderating effects of the green/digital political economy.

4. Performance analysis

Important insights into the elements influencing ESGP across firms are offered by the research's findings. Along with the moderating influence of the green/digital policy environment, statistical analysis also shows the impacts of incentive contracts and organizational behavior. These results demonstrate how crucial it is to combine external policy support with internal management techniques to achieve better ESG results.

4.1 Descriptive statistical test

The main features of the research variables, ESG performance, incentive contracts, organizational behavior, and the green/digital political economy index, are gathered and described using descriptive statistics. Metrics such as mean, range, and standard deviation provide insights into core tendencies and variability, enabling a clear understanding of firm-level ESG-related developments without extrapolating beyond the tested firms.

Table 5: Descriptive Statistics of Outcome for ESGP

Variable	N	Min	Max	Mean	Std. Deviation
ESGP Score	325	45.20	92.50	68.34	10.27
Organizational Behavior Index		2.10	4.90	3.65	0.58
Incentive Contract Score		1.00	5.00	3.42	0.92
Green/Digital Political Economy Index		35.00	89.00	62.75	12.48

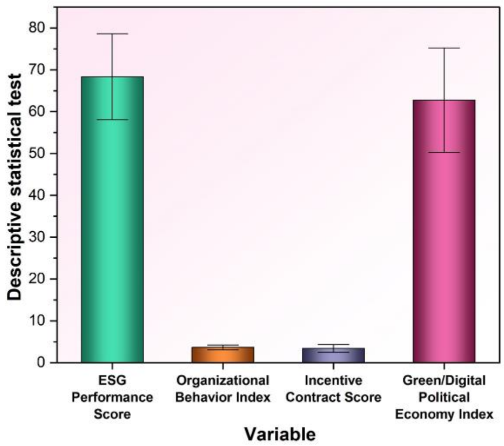

Figure 3. Mean Scores and Variability of ESG and Related Variables

The descriptive statistics show that the mean ESGP score is 68.34, ranging from 45.20 to 92.50. The incentive contract and organizational behavior scores had modest averages of 3.42 and 3.65, respectively, as shown in Table 5. Figure 3 illustrates the mean values of the four variables, with error bars representing their standard deviations. The average value of the green/digital index is 62.75. Although there is potential for improvement in incentives and policy-related aspects to improve sustainability outcomes, overall, corporations exhibit balanced ESG performance.

4. 2 Multiple linear regression (MLR) analysis

The statistical technique employed in this research, called MLR, focuses on the combined effects of incentive contracts, organizational behavior, and the green/digital political economy on ESG performance. By simulating a linear surface in multiple-dimensional space, where each dimension represents one predictor plus the dependent variable, it forecasts ESG scores depending on these variables. The MLR equation may be used to represent the relationship between a dependent factor and several independent factors. It may be represented as the equation (1) that follows:

$$y = B_0 + B_1x_1 + B_2x_2 + \ldots + B_kx_k + \varepsilon \tag{1}$$

The variable of dependent is denoted by y, the variables of independent by x_i, the coefficients by B_i (which indicate the influence of each independent variable), and the error term by ε.

Table 6: MLR Analysis of Factors Influencing ESG Performance

Predictor Variable	B	Std. Error	Beta (β)	t	Sig. (p)
(Constant)	42.315	3.287	—	12.87	0.000
Organizational Behavior Index	0.284	0.112	0.216	2.54	0.012
Incentive Contract Score	0.421	0.095	0.352	4.43	0.000
Green/Digital Political Economy Index	0.198	0.084	0.165	2.36	0.019

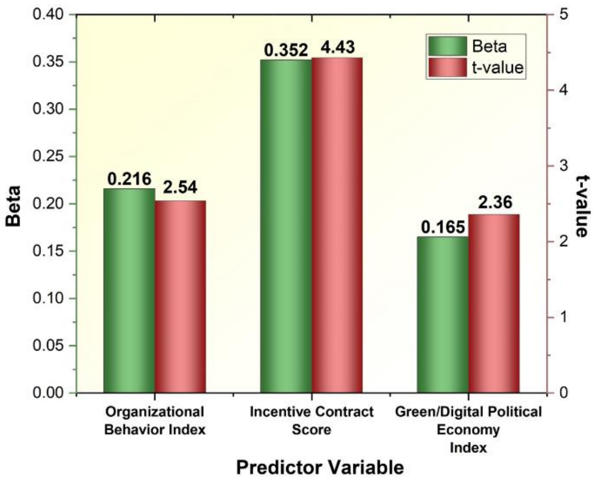

Figure 4: Regression Coefficients and Significance Levels for ESGP Predictors

The results of the MLR analysis depict that the green/digital political economy, incentive contracts, and organizational behavior all have a positive effect on ESGP, as shown in Table 6. The statistical significance (t-values) and standardized effect sizes (Beta) of the key factors affecting ESGP are presented in Figure 4. Contracts for incentives have the most impact, followed by organizational behavior and the environment of digital and green policies. The overall test is statistically significant, indicating that these characteristics consistently predict improved ESGP across the organizations within the analysis. The model accounts for about 46.6% of the variation in ESG scores.

4.3 Moderated Fixed-Effects Regression Analysis

A method for testing interaction effects (moderation) in a panel data framework while taking into account unobserved heterogeneity between entities using fixed effects is called "moderated regression with fixed effects models," as shown in equation (2). The external green/digital political economy influences the relationship between internal factors, like organizational behavior and incentive contracts, and ESG performance, as investigated using moderated regression with fixed-effects models. This technique also accounts for time-invariant variables unique to each company, allowing for a more detailed understanding of how supportive policy settings increase or decrease the influence of internal organizational practices on ESG results.

$$Y_{it} = \beta_1 X_{it} + \beta_2 M_{it} + \beta_3 (X_{it} \cdot M_{it}) + \alpha_i + \lambda_t + \epsilon_{it} \quad (2)$$

Let X be the independent variable or predictor, and let Y_{it} be the dependent variable for item i at time t. The moderator variable, M_{it}, is represented by the interaction term $X_{it} \cdot M_{it}$, which captures the moderating effect and determines whether the influence of X on Y is dependent on the amount of M. An entity-specific fixed effect called α_i is incorporated into the model to account for time-invariant unobserved heterogeneity between persons or entities. To adjust for frequent shocks or trends over time, λ_t might optionally be included as a time-fixed effect. ϵ_{it} represents the error term. Coefficients $\beta_1, \beta_2, and\ \beta_3$ indicate the influence of moderator M, predictor X, and their interaction (moderation effect), respectively.

Table 7: Enhancing ESGP through Green/Digital Policies and Incentive Contracts based on Moderated Fixed-Effects Regression Analysis

Variable	Coefficient (β)	Standard Error	t − value	p − value
Organizational Behavior	0.28	0.12	2.33	0.020
Incentive Contracts	0.42	0.10	4.20	<0.001
Green/Digital Political Economy (Moderator)	0.31	0.11	2.82	0.006
Incentive Contracts × Moderator (Interaction)	0.35	0.09	3.89	<0.001
Constant	2.10	0.45	4.67	<0.001
Model Fit Statistics				
R^2	0.48			
Adjusted R^2	0.45			
F − statistic	16.75			<0.001

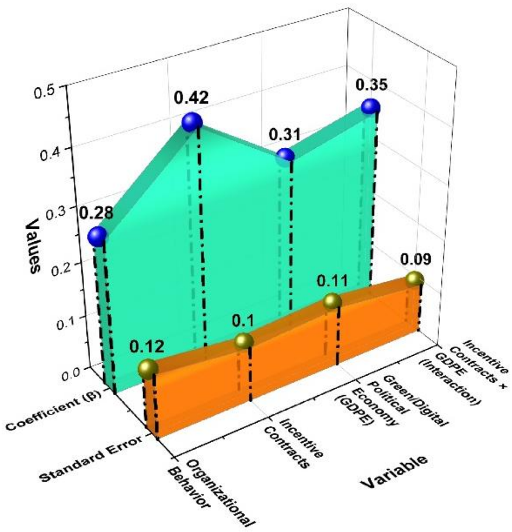

Figure 5: Coefficients from Moderated Fixed-Effects Regression on ESGP

The moderated regression with fixed effects showed that both organizational behavior and incentive contracts positively affect ESGP, as exposed in Table 7 and Figure 5. The green/digital political economy also has a positive influence. Importantly, the interaction between incentive contracts and the political economy was significant, meaning that effective policies strengthen the impact of incentives on ESG.

Overall, the model explained 48% of the variation in ESG scores, indicating a strong relationship between these factors.

5. Discussion

ESGP has emerged as a major focus for firms seeking long-term success in a period of increasing regulatory and stakeholder demands. The current research examines the moderating effects of the digital political economies on the relationship between internal organizational behavior and incentive contracts and ESG performance. The research [22] evaluates how the ESGP of Chinese e-commerce companies' employees affects their green practices. Results from the analysis of data from 1285 participants indicated that green behavior is favorably impacted by ESG performance, both directly and indirectly, through a green psychological climate. Interestingly, when substantial ESG action levels rose from low (0.047) to medium (0.065) and high (0.085), the indirect effect grew. Then, the next analysis [19] investigates the association between green innovation evaluation and Environmental Corporate Social Responsibility (ECSR) in Chinese manufacturing enterprises. After analyzing data from 314 replies, it was shown that ECSR had a good influence on green innovation both directly ($\beta = 0.495$, $p < 0.001$) and indirectly ($\beta = 0.248$, $p < 0.001$) by green dynamic capacities. This confirmed the important mediating effects of environmental regulation pressure and green knowledge sharing.

By analyzing the three statistical tests, such as descriptive statistics, MLR, and moderated fixed-effect regression, the research demonstrates that organizational behavior and incentive contracts have significant beneficial effects on ESG performance. The average ESG score for every firm is high, according to descriptive analysis. Regression analysis reveals that organizational behavior ($\beta = 0.28, p < 0.05$) and incentive contracts ($\beta = 0.42, p < 0.001$) are powerful predictors. Additionally, the moderating effect of digital/green political economy (interaction$\beta = 0.35, p < 0.001$) highlights how incentives have a greater influence when external policies are supportive. ESGP is positively impacted by incentive contracts and organizational behavior, with incentive contracts having the greatest impact, based on the data. Furthermore, in policy contexts that are supportive of ESG, the green/digital political economy considerably moderates this relationship.

6. Conclusion

ESGP is influenced by internal organizational behavior and incentive contracts, which are tempered by external green/digital political economy circumstances. The research utilized descriptive statistics and multiple linear regression and moderated fixed-effects regressions using panel data involving 325 listed firms in different industries and across incomes (2020-2024). The mean ESG score was 68.34, and incentive contracts ($\beta = 0.42, p < 0.001$) and organizational behavior ($\beta = 0.28, p < 0.05$) had significant positive effects. The green/digital political economy index ($mean = 62.75$) also had a positive impact on ESG, and its reception with the incentive contracts (ESG resulted in $\beta = 0.35, p < 0.001$) played a reinforcing role. The model was able to explain 48% of the depiction of ESGP. In conclusion, the research suggests that interior incentive organization, and participatory organizational practices, combined with desirable policy favorability in the external environment, have the potential to boost ESGP immensely and thus offer perceptible lessons to both business and policymakers who want to achieve sustainability enhancement worldwide.

7. Limitations and Future Research Directions

This study is subject to several limitations that should be acknowledged when interpreting the findings. First, the analysis relies primarily on self-reported ESG and organizational data, which may be affected by common method variance and social desirability bias, potentially inflating or distorting the observed relationships. Second, the empirical sample consists exclusively of publicly listed firms, which typically face stronger disclosure requirements and investor scrutiny than private or state-owned enterprises. As a result, the conclusions may not be fully generalizable to non-listed firms or to organizational contexts with less developed reporting and governance frameworks.

Future research could enhance both internal and external validity by incorporating more objective measures of ESG performance (e.g., third-party ESG ratings, regulatory compliance data, or verified emissions and social indicators), as well as triangulating survey-based constructs with archival and behavioral data. Longitudinal case studies and panel designs with longer time horizons would allow for a more rigorous examination of dynamic causal mechanisms between micro-level incentives, organizational behavior, and ESG outcomes. In addition, expanding the firm sample to include private, state-owned, and small and medium-sized enterprises across diverse institutional environments would improve the generalizability of the results.

From a sectoral perspective, further work is warranted on the application of ESG frameworks in the energy sector, where the interaction between renewable energy integration, carbon transition risks, and regulatory compliance is particularly salient. Similarly, the financial services industry represents only one domain in which ESG-linked incentive schemes operate. Future studies could systematically investigate how different designs of ESG-contingent compensation and performance contracts affect asset returns, risk profiles, and portfolio sustainability across varying policy regimes and macro-financial conditions.

Funding

This research received no external funding.

Institutional Review Board Statement

Not applicable.

Informed Consent Statement

Not applicable.

.

Data Availability Statement

No new data were created or analyzed in this study. Data sharing is not applicable to this article.

Acknowledgments

Not Applicable.

Conflicts of Interest

Not Applicable.

References

[1] E. Ingebretsen, (2023) "ESG is a key pillar of investment strategy," Journal of Securities Operations & Custody, 16(1), pp. 57-69. http://dx.doi.org/10.69554/XOFL7906

[2] N. Annesi, M. Battaglia, I. Ceglia, and F. Mercuri, (2025) "Navigating paradoxes: Building a sustainable strategy for an integrated ESG corporate governance," Management Decision, 63(2), pp. 531-559. https://doi.org/10.1108/MD-10-2023-2006

[3] N. Alessa, J. Y. Akparep, I. Sulemana, and A. O. Agyemang, (2024) "Does stakeholder pressure influence firms environmental, social and governance (ESG) disclosure? Evidence from Ghana," Cogent Business & Management, 11(1), p. 2303790. https://doi.org/10.1080/23311975.2024.2303790

[4] M. Gurung, S. Taneja, G. Singh, M. Kaur, and D. Kalra, (2025) "Bridging the Gap: Aligning ESG With Financial Disclosures for a Sustainable Global Trade System," In Aligning Financial Reporting Standards With Global Trade Needs, pp. 1-28. IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3373-0887-6.ch001

[5] W. Guifang, (2024) "A Micro-Class Teaching Data Retrieval Method of Business English Based on Network Information Classification," Informatica, 48(6). https://doi.org/10.31449/inf.v48i6.5450

[6] M. Carreño, (2024) "Strategic Integration of ESG in Business Transformation: A Roadmap for Sustainable Success," SSRN, p. 4986686. https://dx.doi.org/10.2139/ssrn.4986686

[7] Z. Jiao, (2025) "Enhanced Bank Marketing System Using Optimized GSA-BP Neural Network for Improved Customer Targeting," Informatica, 49(17). https://doi.org/10.31449/inf.v49i17.6960

[8] X. Zhang, Q. Jiang, J. Cifuentes-Faura, X. Hu, and Y. Li, (2025) "Do tax incentives matter in promoting corporate ESG performance toward sustainable development?," Business Strategy and the Environment, 34(1), pp. 57-69. https://doi.org/10.1002/bse.3966

[9] Y. Liu, Y. Yang, X. Zhang, and Y. Yang, (2024) "The impact of technological innovation on the green digital economy and development strategies," PLOS ONE, 19(4), e0301051. https://doi.org/10.1371/journal.pone.0301051

[10] F. Akilah, (2024) "ESG Implementation in Business: Managing the Sustainability Goals in Micro, Small, and Medium Enterprises (MSMEs)," SUKUK: International Journal of Banking, Finance, Management and Business, 3(1), pp. 55-67.

[11] K. A. Markovich, E. A. Alekseevna, and C. D. Alekseevna, (2022) "Ecological, Social and Governance Impact on the Company's Performance: Information Technology Sector Insight," Procedia Computer Science, 214, pp. 1065-1072. https://doi.org/10.1016/j.procs.2022.11.278

[12] S. Suhardjo, Y. Wati, N. Renaldo, S. Musa, and C. Cecilia, (2024) "Implementation of Digital Accounting on the Effectiveness of Corporate Social Responsibility and Environmental, Social, and Governance Reporting," Interconnection: An Economic Perspective Horizon, 2(1), pp. 41-49. https://doi.org/10.61230/interconnection.v2i1.90

[13] Perdana and S. Tan, (2024) "Harnessing Technologies and Data to Accelerate and Operationalize Environmental, Social, and Governance (ESG) Initiatives," In Digital Transformation in Accounting and Auditing: Navigating Technological Advances for the Future, pp. 347-375. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-46209-2_12

[14] S. Chen, Y. Song, and P. Gao, (2023) "Environmental, social, and governance (ESG) performance and financial outcomes: Analyzing the impact of ESG on financial performance," Journal of Environmental Management, 345, 118829. https://doi.org/10.1016/j.jenvman.2023.118829

[15] U. Karki, A. Kumar, and D. Sharma, (2025) "Banking in sustainability: an integrated MCDM framework for evaluating the environmental, social, and governance (ESG) sustainable banking performance," Global Knowledge, Memory and Communication. https://doi.org/10.1108/GKMC-04-2024-0241

[16] Shaikh, (2022) "Environmental, social, and governance (ESG) practice and firm performance: an international evidence," Journal of Business Economics and Management, 23(1), pp. 218-237. https://doi.org/10.3846/jbem.2022.16202

[17] X. Bao, B. Sun, M. Han, Q. Mai, and H. Lin, (2024) "Corporate integrity culture on environmental, social, and governance (ESG) performance," Corporate Social Responsibility and Environmental Management, 31(2), pp. 1399-1417. https://doi.org/10.1002/csr.2637

[18] T. H. Ng, C. T. Lye, K. H. Chan, Y. Z. Lim, and Y. S. Lim, (2020) "Sustainability in Asia: The roles of financial development in environmental, social and governance (ESG) performance," Social Indicators Research, 150(1), pp. 17-44. https://doi.org/10.1007/s11205-020-02288-w

[19] Z. Yu, U. Farooq, M. M. Alam, and J. Dai, (2024) "How does environmental, social, and governance (ESG) performance determine investment mix? New empirical evidence from BRICS," Borsa Istanbul Review, 24(3), pp. 520-529. https://doi.org/10.1016/j.bir.2024.02.007

[20] M. Saharti, S. M. Chaudhry, V. Pekar, and E. Bajoori, (2024) "Environmental, social and governance (ESG) performance of firms in the era of geopolitical conflicts," Journal of Environmental Management, 351, 119744. https://doi.org/10.1016/j.jenvman.2023.119744

[21] Y. Xu and N. Zhu, (2024) "The effect of environmental, social, and governance (ESG) performance on corporate financial performance in China: Based on the perspective of innovation and financial constraints," Sustainability, 16(8), 3329. https://doi.org/10.3390/su16083329

[22] R. Wang and Y. Hu, (2025) "Green Behaviors Among Employees in Chinese E-Commerce Companies: Impact of Environmental, Social, and Governance (ESG) Performance," Sustainability, 17(3), p. 940. https://doi.org/10.3390/su17030940

参考文献

[1] E. Ingebretsen. (2023). "ESG是投资战略的关键支柱," Journal of Securities Operations & Custody, 16(1), pp. 57–69. http://dx.doi.org/10.69554/XOFL7906

[2] N. Annesi, M. Battaglia, I. Ceglia, and F. Mercuri. (2025). "驾驭悖论：构建一体化ESG公司治理的可持续战略," Management Decision, 63(2), pp. 531–559. https://doi.org/10.1108/MD-10-2023-2006

[3] N. Alessa, J. Y. Akparep, I. Sulemana, and A. O. Agyemang. (2024). "利益相关者压力是否会影响企业环境、社会与治理（ESG）信息披露？来自加纳的证据," Cogent Business & Management, 11(1), p. 2303790. https://doi.org/10.1080/23311975.2024.2303790

[4] M. Gurung, S. Taneja, G. Singh, M. Kaur, and D. Kalra. (2025). "弥合鸿沟：将ESG与财务披露对接以构建可持续的全球贸易体系," In Aligning Financial Reporting Standards With Global Trade Needs, pp. 1–28. IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3373-0887-6.ch001

[5] W. Guifang. (2024). "基于网络信息分类的商务英语微课教学数据检索方法," Informatica, 48(6). https://doi.org/10.31449/inf.v48i6.5450

[6] M. Carreño. (2024). "企业转型中ESG的战略整合：通向可持续成功的路线图," SSRN, p. 4986686. https://dx.doi.org/10.2139/ssrn.4986686

[7] Z. Jiao. (2025). "基于优化GSA-BP神经网络的银行营销系统：提升客户定位效果," Informatica, 49(17). https://doi.org/10.31449/inf.v49i17.6960

[8] X. Zhang, Q. Jiang, J. Cifuentes-Faura, X. Hu, and Y. Li. (2025). "税收激励在推动企业ESG绩效以实现可持续发展中是否重要？," Business Strategy and the Environment, 34(1), pp. 57–69. https://doi.org/10.1002/bse.3966

[9] Y. Liu, Y. Yang, X. Zhang, and Y. Yang. (2024). "技术创新对绿色数字经济及其发展战略的影响," PLOS ONE, 19(4), e0301051. https://doi.org/10.1371/journal.pone.0301051

[10] F. Akilah. (2024). "企业ESG实施：管理微型、小型与中型企业（MSMEs）的可持续发展目标," SUKUK: International Journal of Banking, Finance, Management and Business, 3(1), pp. 55–67.

[11] K. A. Markovich, E. A. Alekseevna, and C. D. Alekseevna. (2022). “生态、社会与治理对公司绩效的影响：来自信息技术行业的洞见,” Procedia Computer Science, 214, pp. 1065–1072. https://doi.org/10.1016/j.procs.2022.11.278

[12] S. Suhardjo, Y. Wati, N. Renaldo, S. Musa, and C. Cecilia. (2024). “数字化会计实施对企业社会责任及环境、社会与治理报告有效性的影响,” Interconnection: An Economic Perspective Horizon, 2(1), pp. 41–49. https://doi.org/10.61230/interconnection.v2i1.90

[13] Perdana and S. Tan. (2024). “利用技术与数据加速并落实环境、社会与治理（ESG）举措,” In Digital Transformation in Accounting and Auditing: Navigating Technological Advances for the Future, pp. 347–375. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-031-46209-2_12

[14] S. Chen, Y. Song, and P. Gao. (2023). “环境、社会与治理（ESG）绩效与财务结果：分析ESG对财务绩效的影响,” Journal of Environmental Management, 345, 118829. https://doi.org/10.1016/j.jenvman.2023.118829

[15] U. Karki, A. Kumar, and D. Sharma. (2025). “可持续银行业务：评估环境、社会与治理（ESG）可持续银行绩效的集成MCDM框架,” Global Knowledge, Memory and Communication. https://doi.org/10.1108/GKMC-04-2024-0241

[16] Shaikh. (2022). “环境、社会与治理（ESG）实践与公司绩效：国际证据,” Journal of Business Economics and Management, 23(1), pp. 218–237. https://doi.org/10.3846/jbem.2022.16202

[17] X. Bao, B. Sun, M. Han, Q. Mai, and H. Lin. (2024). “企业诚信文化对环境、社会与治理（ESG）绩效的影响,” Corporate Social Responsibility and Environmental Management, 31(2), pp. 1399–1417. https://doi.org/10.1002/csr.2637

[18] T. H. Ng, C. T. Lye, K. H. Chan, Y. Z. Lim, and Y. S. Lim. (2020). “亚洲的可持续发展：金融发展在环境、社会与治理（ESG）绩效中的作用,” Social Indicators Research, 150(1), pp. 17–44. https://doi.org/10.1007/s11205-020-02288-w

[19] Z. Yu, U. Farooq, M. M. Alam, and J. Dai. (2024). “环境、社会与治理（ESG）绩效如何决定投资组合？来自金砖国家的新实证证据,” Borsa Istanbul Review, 24(3), pp. 520–529. https://doi.org/10.1016/j.bir.2024.02.007

[20] M. Saharti, S. M. Chaudhry, V. Pekar, and E. Bajoori. (2024). “地缘政治冲突时代企业的环境、社会与治理（ESG）绩效,” Journal of Environmental Management, 351, 119744. https://doi.org/10.1016/j.jenvman.2023.119744

[21] Y. Xu and N. Zhu. (2024). “中国环境、社会与治理（ESG）绩效对公司财务绩效的影响：基于创新与融资约束视角,” Sustainability, 16(8), 3329. https://doi.org/10.3390/su16083329

[22] R. Wang and Y. Hu. (2025). “中国电子商务企业员工的绿色行为：环境、社会与治理（ESG）绩效的影响,” Sustainability, 17(3), p. 940. https://doi.org/10.3390/su17030940