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RESEARCH ARTICLE OPEN ACCESS

Political Appointment of Executives, Green Action and Firm Performance: Evidence From the World Bank Enterprise Survey

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Received: 3 December 2025 | **Revised:** 7 April 2026 | **Accepted:** 20 April 2026

Keywords: business environment | firm performance | green action | political appointment | sales growth

ABSTRACT

Environmental sustainability and political influence increasingly shape corporate strategy, yet the link between politically appointed executives and firms' environmental actions remains underexplored. This study investigates whether political appointments to top executive positions influence the adoption of green action initiatives and how these initiatives, in turn, affect firm performance. Using World Bank Enterprise Survey data from 28,042 firms across 41 Middle Eastern and North American countries (2018–2020), we examine five environmental practices to construct a green action index and analyse its mediating role in the political appointment–performance relationship. Our results show that firms led by politically appointed executives are significantly more likely to adopt green initiatives, even after controlling for firm characteristics and institutional factors. We further find that green action partially offsets the otherwise ambiguous or adverse association between political appointments and sales growth, indicating that environmental initiatives serve as a strategic legitimacy mechanism. This mediating effect is particularly pronounced in publicly listed firms, where external scrutiny is higher. The study contributes to research on political connections, ESG strategy and firm performance by demonstrating that green action is not merely compliance-driven but a strategic response to political embeddedness, offering practical insights for policymakers, investors and corporate boards.

1 | Introduction

The intersection of political governance and corporate environmental strategy raises a critical but insufficiently defined question: how do politically appointed executives influence firms' environmental actions and commercial outcomes? Although political appointments are widespread across public and private enterprises (Wang et al. 2019; Zheng et al. 2022), existing evidence is mixed on whether such appointments enhance or weaken firm performance (Aguilera et al. 2021; Bayat et al. 2025; Coelho et al. 2024). At the same time, firms face intensifying pressure to adopt environmentally responsible practices as part of the ESG agenda (Cao et al. 2022; Krueger et al. 2020). Yet, despite extensive research on CEO characteristics (Birindelli et al. 2019), political connections (Faccio 2006) and environmental behaviour (Bag et al. 2022; Shahzad et al. 2024), the specific role of politically appointed executives in shaping firm-level green action and performance remains largely unexplored.

To address this gap, we introduce the following research questions:

RQ1: How do political appointments of executives influence the adoption of green action initiatives within firms?

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RQ2: To what extent do green action initiatives mediate the relationship between political appointments and corporate sales performance?

These questions matter because politically appointed executives face dual, potentially conflicting pressures. Political ties may provide access to resources, regulatory advantages and legitimacy (Li and Zhang 2007; Toral 2024), but they also create expectations to demonstrate visible environmental commitment (Iguchi et al. 2021). Green initiatives require investment, organisational restructuring and compliance efforts, which may dilute the commercial benefits typically associated with political connections (Fan et al. 2007). Understanding whether green action serves as a strategic response to these pressures is therefore essential for policymakers, investors and boards navigating the expanding ESG landscape.

Although prior studies have examined political appointments in relation to policy influence (Anderson et al. 2023; Dahlström and Holmgren 2015; Wang et al. 2019), access to resources (Georgantopoulos and Filos 2017; Toral 2024) and organisational outcomes (McGee et al. 1995; Shane and Cable 2002), they have not explored how politically appointed executives shape firm-level environmental practices or whether such practices translate into improved performance. Research on CEO personal characteristics, gender, education, inventiveness and environmental consciousness (Birindelli et al. 2019; Cui and Wang 2022) has similarly overlooked the political dimension. Likewise, studies on green investment and environmental innovation (Chen and Ma 2021; Tang et al. 2018) do not consider the political origins of executive leadership. This leaves a critical gap at the intersection of political appointments, green action and firm performance.

Our empirical strategy directly addresses this gap. Using World Bank Enterprise Survey microdata from 28,042 firms across 41 Middle Eastern and North American countries (2018–2020), we examine five environmental practices to construct a green action index and apply a two-stage least squares approach to identify the mediating role of green action. The WBES dataset is uniquely suited to our research questions because it provides harmonised, firm-level measures of political appointment, environmental practices and performance across diverse institutional contexts—allowing us to test mechanisms that cannot be examined using single-country or archival datasets.

Our findings reveal three key insights. First, politically appointed executives are significantly more likely to adopt green action initiatives, supporting arguments that political ties heighten legitimacy pressures and environmental responsiveness (Li et al. 2024). Second, green action mediates the relationship between political appointments and sales growth, mitigating the otherwise ambiguous or adverse performance effects associated with political appointments. Third, this mediating effect is strongest in publicly listed firms, where external scrutiny is higher. These results align with Kim (2024), who finds that political liberalism enhances environmental performance. Still, we extend the literature by showing that political appointment itself, regardless of ideology, drives green action and shapes performance outcomes.

Theoretically, the study contributes by identifying green action as a previously overlooked mechanism linking political appointments to firm performance, integrating insights from political connections research (Faccio 2006; Zhang et al. 2019), CEO characteristics (Hossain et al. 2023; Lai et al. 2021) and environmental strategy (Lozano 2020; Waris et al. 2024). Practically, the findings suggest that politically influenced firms can leverage environmental initiatives to enhance legitimacy and commercial outcomes, offering actionable implications for regulators, boards and investors concerned with sustainability, governance and political embeddedness.

The remainder of this paper is organised as follows. Section 2 discusses the theoretical framework and the development of the hypothesis. Section 3 describes the data and methodology, and Section 4 presents our main results. Section 5 concludes the study.

2 | Theoretical Framework and Hypothesis Development

We develop an integrated framework that draws on legitimacy, risk management and institutional theories to explain how political affiliation influences firm-level green actions. First, from a legitimacy perspective, firms seek congruence with societal expectations to secure continued support and survival (Suchman 1995). Politically affiliated firms are more visible and closely associated with government actors, exposing them to greater scrutiny from regulators and stakeholders. This heightened visibility increases their incentives to engage in green actions to maintain legitimacy and avoid reputational damage. Second, from a risk management perspective, environmental exposure, particularly carbon emissions, constitutes regulatory, financial and reputational risk (Porter and Linde 1995). Politically connected firms may possess superior information about impending regulations and the enforcement intensity associated with them. Rather than encouraging complacency, this informational advantage can incentivise proactive environmental investments to mitigate future compliance costs, reduce regulatory uncertainty and manage downside risks. Complementing these views, institutional theory argues that firm behaviour is shaped by coercive, normative and mimetic pressures (DiMaggio and Powell 1983). Politically affiliated firms are more deeply embedded within institutional structures and are therefore more responsive to policy expectations, regulatory signals and global sustainability norms. This embeddedness amplifies their sensitivity to institutional pressures, leading to stronger adoption of green practices.

Importantly, prior research on political connections (Faccio 2006) often emphasises regulatory advantages and potential rent-seeking behaviour. However, integrating the above perspectives suggests an alternative mechanism: Politically connected firms may engage more actively in environmental initiatives to secure legitimacy, manage environmental risks and align with institutional pressures. This provides a theoretical explanation for our counterintuitive empirical finding that political affiliation is positively associated with green actions. We first justify why political appointments are expected to lead to more effective green initiatives. We then focus on the mediating effect of green action

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on sales performance. Our primary approach is to explain green action's political appointment and sales performance and establish the relevance of sustainability initiatives for firm-level sales performance.

2.1 | The Political Appointments and Green Action

The key impacts of green action for firms revolve around two key themes: sales growth and political appointments. It is well established in the literature that top managers play a crucial role in a firm's success (McGee et al. 1995). Managers can generally offer social capital through political ties, such as sustainability initiatives (Del Bosco and Misani 2016; Robson et al. 2019; Shane and Cable 2002). It is argued that green action initiatives are similar to insurance, that is, protection against unexpected events (Godfrey et al. 2009). Building on this concept, Iguchi et al. (2021) suggest that CEOs with religious beliefs are more likely to engage in corporate green initiatives. CEOs have taken oaths to comply with the law and committed themselves within the bounds of religion. Green action and political appointments are also linked through a theoretical boundary that views green action as a sustainable investment to maintain competitive investment (Lev 2017). Furthermore, firms utilise sustainable practices to secure additional financial support (Hoogendoorn et al. 2015). It is also reported that green action initiatives reduce stock market volatility (Naseer et al. 2024), the likelihood of financial distress (Al-Hadi et al. 2019) and safeguard firms from adverse impacts (Minor and Morgan 2011). Yet, these benefits come with non-trivial organisational costs. Green initiatives often require upfront investments, operational restructuring and compliance reporting, which may strain firms, particularly. Those already navigating politically motivated expectations. Politically appointed executives may therefore face a dual burden-fulfilling political obligations while meeting environmental legitimacy demands. This dual burden can lead to resource fragmentation and strategic dilution, thereby reducing the net performance benefits typically associated with political appointments.

Furthermore, firms can benefit from green action initiative investments by reducing downward pressure on stock prices and crash risk (Maxfield and Wang 2021). Regarding green action, many studies have shown the impact of corporate social responsibility on a range of firm-level performance (Akben-Selcuk 2019; Al-Shammari et al. 2022; Ben Saad et al. 2024; Harjoto 2017; Walker et al. 2019; Xue et al. 2022). Most prior studies show that green action-related initiatives have a positive effect on firm-level performance. For instance, Chen and Ma (2021) show that green investment is directly linked to financial performance. Tang et al. (2018) argue that green investments, such as process and product innovation, positively influence firm performance. Once managerial concerns are incorporated, they argue that green process innovation has a progressive effect on firm performance (Tang et al. 2018).

In our context, we argue that the political connection between CEOs and managers increases the likelihood of public trust and compliance with environmental regulations and increases the demand for climate-friendly activities such as sustainable investment practices (Awalurramadhana 2025; Corfee-Morlot et al. 2012; Eyo-Udo et al. 2024; Gonguet et al. 2021; Richardson 2012). It is important to note that green initiatives per se do not force firms to appoint politically connected executives, which is exogenous to firms. Instead, it is considered partly associated with the positive outcomes of green initiative practices. Although WBES is a firm-level survey, it is widely used to infer country-level business environment conditions from firm-level responses. Other WBES studies formulate hypotheses regarding country-level exposure or institutional features, then test them using firm-level data and country fixed effects (Barth et al. 2003; De Haas and Naaborg 2006; Khan 2023; Moyo and Sibindi 2022). But firms in countries with greater exposure to political appointments reflect the fact that political appointments are both a firm attribute and a contextual characteristic that varies systematically across countries. This is consistent with political economy research, which finds that country-level political structures shape firm-level behaviour (Fan et al. 2007; Wang et al. 2008; Zhang et al. 2019). Our theoretical model integrates legitimacy theory, risk management theory and institutional theory. Political appointments increase executives' visibility and accountability pressures, making them more likely to adopt green initiatives as 'insurance-like' mechanisms to manage political and reputational risk (Godfrey et al. 2009; Lev 2017). In environments where political ties are salient (Qi et al. 2021; Rabadán et al. 2020), firms respond by adopting green actions to secure legitimacy, regulatory goodwill and access to political resources (Hoogendoorn et al. 2015; Naseer et al. 2024). This theoretical logic directly motivates Hypothesis 1. Thus, we formulate our first hypothesis as follows:

Hypothesis 1. *Firms in countries with greater exposure to political appointments have more green action initiatives.*

We have strengthened the theoretical justification for Hypothesis 1 by explicitly linking it to the multilevel nature of political appointments. Political appointments operate simultaneously as firm-level attributes and country-level institutional features. Countries with higher exposure to politically appointed executives exhibit stronger political embeddedness in corporate governance, which shapes firms' incentives to adopt legitimacy-enhancing practices such as green initiatives. This logic is consistent with institutional theory, which argues that firms respond to national political structures through conformity-seeking behaviour (Claessens et al. 2008; Faccio 2006; Fisman 2001). Therefore, the hypothesis reflects the institutional embeddedness of political appointments.

2.2 | Political Appointment and Mediating Effect of Green Action on Sales Growth

Given the above arguments that underline the value of firms' green initiatives, we postulate that they help motivate executives to improve their investment practices towards a green environment through political reputation, networks and sustainability channels. Studies indicate that political connections can help companies navigate complex regulatory landscapes and overcome bureaucratic obstacles (Adomako et al. 2023; Fernández-Méndez et al. 2018; Rajwani and Liedong 2015). Green action initiatives have a causal effect on

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firm performance (Dechezleprêtre et al. 2019). Politically connected CEOs often gain advantages, such as enhanced access to resources, government contracts and favourable regulatory relationships (Amore and Bennedsen 2013; Faccio 2006). However, on the dark side, such appointments may also lead to ineffectiveness due to misaligned benefits or the prioritisation of political incentives over shareholder interests (Fan et al. 2007). For instance, firms with politically connected CEOs are more likely to invest in projects that strongly align with governmental priorities (Li et al. 2008). Studies also show that politically linked executives may influence corporate long-term action plans such as project expansion, capital budgeting, financing and investment decisions (Liu et al. 2013). Some studies also note that the effects of such appointments on firm performance often depend on institutional settings and the degree of government involvement (Wang et al. 2008). Political ties may be less serious for firm success in countries with strong institutions, whereas weak functional settings can be a significant determinant (Claessens et al. 2008). Wang et al. (2018) further argue that political ties are less respectable or reliable, especially when perceived as based on nepotism or corruption. Furthermore, political ties may give rise to conflicts of interest or other moral dilemmas, especially when they entail the giving and receiving of favours or other quid pro quo (Liedong 2023).

Green actions, such as sustainability initiatives and environmental responsibility practices, have increased substantial consideration in recent years (Aiguobarueghian et al. 2024; Lozano 2020; Paudel et al. 2024; Waris et al. 2024). Because politically connected companies take fewer risks, the impact of politically connected CEOs on financial stability depends on the strength of those connections (Chong et al. 2018; Hardiningsih et al. 2024; Khanchel et al. 2025; Rahim et al. 2024). Firms adopting green practices often experience improved standing and cost savings through more efficient use of resources (Hart and Dowell 2011; Peng 2024). Moreover, green innovation and environmental responsibility are associated with long-term financial performance (Ai et al. 2024; Ha et al. 2024; Porter and Linde 1995). Stakeholders gradually require sustainable practices, advocating that corporations incorporate environmental concerns into their functional and strategic goals (Eccles et al. 2014; Qing et al. 2024; Vanacker et al. 2021; Wiredu et al. 2024).

The association between green actions and firm performance is not always linear. At the same time, proactive environmental initiatives can create benefits (Ambec and Lanoie 2008). Thus, green actions and integration into core business strategies are crucial in determining their impact on performance. The interaction between politically appointed CEOs and managers may leverage their connections to support environmentally sustainable projects and enhance firm legitimacy (Bansal and Clelland 2004; Liu et al. 2024; Pei et al. 2024). Studies suggest that green initiatives within corporate executives, such as politically appointed CEOs and managers, can mitigate some of the negative effects of political connections, such as resource misallocation, by providing a clear, value-driven strategic focus (Zhang et al. 2019). Therefore, it is rational to expect that green action can motivate politically appointed executives to improve firm performance by serving as a sustainable and secure social and environmental trust. Following the arguments, our second hypothesis is as follows:

Hypothesis 2. *Green active initiatives positively influence political appointments on corporate sales performance.*

3 | Data and Methodology

3.1 | Data

This study employs the World Bank Enterprise Surveys 2018–2020.[1] Our selection of the study is based on the information available in the WBES database, and we respect the quality of data collected by the World Bank Group. Further, we expect that the WBES dataset includes many MSMEs; political connections in these contexts are not limited to formal executive appointments but often operate through ownership ties, personal networks and prior government affiliations. In fact, in emerging economies, owner-managers frequently leverage such connections to navigate regulatory environments, access resources and influence strategic decisions. We fill the methodology gap using survey data (Cocciasecca et al. 2021) to establish the association of political appointments with green action and sales growth; 28,042 responses from 41 Middle Eastern and North American countries are analysed[2] (see Table 1). For more details, please visit http://www.enterprisesurveys.org[3] for data access, the questionnaire and the World Bank Group's data collection methodology.

3.2 | Measurement of Political Appointment

To test our first hypothesis, we employed the response to the question, 'Has the owner, CEO, top manager, or any of the board members of this firm ever been elected or appointed to a political position in this country?' where 1 indicates yes and 0 indicates no.

3.3 | Measurement of Green Action

We calculate green action combining five key green initiatives, namely, (1) the company adopts equipment temperature control, (2) climate-friendly energy generation, (3) machinery and equipment upgrades and (4) energy management and (5) applies air pollution control measures using a summated scale. The minimum value of green action is 0, and the maximum would be 5 if a company adopts all five initiatives. Our study focuses specifically on environmentally oriented operational actions, that is, practices that reflect deliberate investment in climate-friendly technologies, pollution control and energy-efficiency improvements. The five selected items correspond directly to these domains: equipment temperature control, climate-friendly energy generation, machinery and equipment upgrades, energy management adoption and air pollution control measures. These five items represent core environmental interventions that align with established ESG frameworks and prior empirical research on green investment, environmental innovation and sustainability practices. Within the ESG discipline, we focus on the environmental (E) pillar, operationalised through five key areas: energy management practices,

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TABLE 1 | Distribution of sample and country-level measures.

Country	Obs.	Temp	EG	Mac_Upgrade	Egy_mgmt	Measure_AP	Green_action
Albania	377	0.57	0.16	0.54	0.40	0.23	1.90
Armenia2020	546	0.36	0.10	0.40	0.28	0.21	1.34
Azerbaijan	225	0.33	0.05	0.29	0.16	0.10	0.93
Belarus	600	0.35	0.09	0.48	0.40	0.18	1.49
Bosnia and Herze	362	0.47	0.17	0.53	0.27	0.17	1.60
Bulgaria	772	0.39	0.19	0.45	0.30	0.21	1.54
Croatia	404	0.32	0.08	0.37	0.20	0.08	1.05
Cyprus	240	0.38	0.25	0.58	0.27	0.11	1.58
Czechia	502	0.51	0.07	0.62	0.23	0.14	1.56
Egypt	3075	0.10	0.02	0.32	0.17	0.03	0.65
Estonia	360	0.41	0.11	0.67	0.24	0.15	1.58
Georgia	581	0.39	0.07	0.43	0.18	0.15	1.22
Greece	600	0.48	0.22	0.59	0.49	0.13	1.91
Hungary	805	0.30	0.11	0.61	0.39	0.10	1.51
Italy	760	0.39	0.23	0.33	0.30	0.21	1.46
Jordan	601	0.38	0.10	0.43	0.36	0.12	1.39
Kazakhstan	1446	0.31	0.15	0.38	0.26	0.14	1.24
Kosovo	271	0.53	0.32	0.60	0.49	0.29	2.23
Kyrgyz Republic2	360	0.42	0.11	0.46	0.44	0.17	1.60
Latvia	359	0.51	0.08	0.69	0.45	0.20	1.93
Lebanon	532	0.33	0.11	0.38	0.22	0.11	1.14
Lithuania	358	0.39	0.11	0.39	0.22	0.11	1.22
Malta	242	0.49	0.29	0.56	0.28	0.14	1.76
Moldova	360	0.39	0.09	0.52	0.37	0.27	1.64
Mongolia	360	0.53	0.06	0.49	0.18	0.05	1.32
Montenegro	150	0.29	0.04	0.37	0.13	0.07	0.91
Morocco	1096	0.19	0.09	0.17	0.17	0.08	0.69
North Macedonia2	360	0.39	0.15	0.39	0.30	0.20	1.43
Poland	1369	0.24	0.09	0.40	0.25	0.10	1.09
Portugal	1062	0.34	0.25	0.54	0.27	0.16	1.55
Romania	814	0.19	0.09	0.28	0.20	0.13	0.90
Russia	1323	0.20	0.08	0.37	0.34	0.09	1.08
Serbia	361	0.41	0.08	0.39	0.27	0.14	1.29
Slovak Republic2	429	0.46	0.29	0.53	0.16	0.23	1.66
Slovenia	409	0.53	0.19	0.52	0.34	0.19	1.77
Tajikistan	352	0.25	0.12	0.33	0.34	0.16	1.20
Tunisia	615	0.26	0.09	0.30	0.20	0.06	0.90
Türkiye	1663	0.22	0.09	0.30	0.15	0.07	0.82

(Continues)

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TABLE 1 | (Continued)

Country	Obs.	Temp	EG	Mac_Upgrade	Egy_mgmt	Measure_AP	Green_action
Ukraine	1337	0.39	0.15	0.53	0.45	0.20	1.71
Uzbekistan	1239	0.45	0.10	0.53	0.57	0.37	2.02
West Bank And Ga	365	0.27	0.10	0.44	0.27	0.06	1.14
Total	28,042	0.32	0.12	0.42	0.29	0.14	1.28

Note: This table presents the distribution of sample and the mean values of the variables across countries.

carbon emissions and audits, pollution control measures and equipment efficiency upgrades. These are represented by variables such as 'Egy_mgmt' (energy management adoption) and 'Audit_co2Emission' (audit of CO_2 emissions).

Table 1 presents the distribution of the sample by country. Egypt has the highest number of responses (3075), followed by Turkiye (1663) and Kazakistan (1446), respectively. Regarding green action, Kosovo has the largest scale (2.23), followed by Uzbekistan (2.02) and Latvia (1.93).

3.4 | Methodology

Our empirical design is appropriate for testing Hypothesis 1 because WBES provides harmonised firm-level data across countries, enabling us to capture cross-country variation in political appointment exposure. We use firm-level indicators of political appointment, country fixed effects and country-level averages of green action and political appointment intensity in robustness checks. This approach mirrors established empirical strategies in political connections research (Faccio 2006; Fisman 2001; Claessens et al. 2008).

In the first stage, we test the impact of political appointments on green action using the following pooled panel regression with year, country and industry fixed effects.

$$\text{Green Action}_{ict} = \text{Political Appointment}_{ict} + \gamma_t + \delta_c + \eta_i + \epsilon_{ict}, \quad (1)$$

where γ_t, δ_c and η_i denote year, country and industry-specific variables, respectively. Subscripts i, c and t represent the year, country and industry, respectively. We use control variables motivated by (Chukwuma-Ume and Ume 2025; Moyo 2022; Shekar 2025) such as (1) where the company emits CO_2 (D_co2Emit), (2) whether the company conducts an audit assessment for CO_2 emission (Audit_co2Emission), (3) whether the company provides training to full-time production workers (Training_FT_PROD_worker), (4) whether the company conducts a meeting with the environmental manager with the environmental target (Meetng_Evtmgr_evttarget), (5) percentage of domestic sales (Domestic_PCT_sale), (6) whether the company received international certification (INT_CERT), (7) sales of the last 3 years (ln_Lag3_sales), (8) percentage of direct export (direct_expt_PCT), (9) number of multiple establishments (Multi_est), (10) property plant and equipment (ln_PPE), (11) percentage of credit sales (PCT_Credit_SALE), (12) percentage of working capital financing through bank (PCT_WC_bank), (13) whether the company enjoys an overdraft facility from the bank (D_Overdraft), (14) whether the company has a line of credit facility (Line_of_credit), (15) number of full-time employees last year (ln_lag1FTE), (16) number of full-time employees 3 years before (ln_lag3FTE), (17) whether the company has a formal board of directors (BoD_Exist), (18) whether a family member is in management (Mgmt_Familymember) and (19) largest percentage of share ownership (Largest_PCT_OWN). We present the same variable definitions and data source in Table 2.

In the second stage, we test how political appointment and green action interact in explaining firm sales performance by estimating the following equation:

$$\text{Sales performance}_{ict} = \text{Political Appointment}_{ict} + \widehat{\text{Green Action}}_{ict} + \gamma_t + \delta_c + \eta_i + \epsilon_{ict}. \quad (2)$$

In Model 2, we acknowledge that the association between political appointment and green action, as predicted in the first stage, may bias estimates of sales performance. To account for endogeneity arising from the association between political appointment and green action, we use two-stage least squares instrumental variables (2SLS) to estimate the joint impact of these factors on sales performance. Specifically, we use the predicted value of green action (predicted_green_action) from the first stage in the second stage of our analysis. We apply this approach similar to Ozkan et al. (2023). We also include the industry green action mean (green_action_industry) and the country-level green action mean (green_action_country) as additional determinants of green action in the first stage. We control for year-, country- and industry-fixed effects in all regressions.

4 | Main Results

4.1 | Summary Statistics

Table 3 summarises the descriptive statistics of the variables used in the analysis. The average sales growth across firms is 12.29%. Green actions, measured as a summated scale of five climate initiatives, have an average score of 1.28 (out of 5). Politically appointed leadership, represented by Political_APP, is observed in only 5.7% of firms, highlighting a relatively low incidence. Regarding environmental practices, 13.2% of firms report CO_2 emissions (D_co2Emit), yet only 4.2% conduct CO_2 audits (Audit_co2Emission), suggesting limited environmental accountability. Training for full-time production workers remains sparse, with an average of 4.03% receiving training,

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TABLE 2 | Variable definitions and data sources.

Variable	Definition	Source
Green_action	Summated scale from five climate initiatives (Temp, EG, Mac_updgrade, Egy_mgmt and Measure_AP)	WBES
Temp	Value 1, adopt equipment temperature control	WBES
EG	Value1, climate-friendly energy generation	WBES
Mac_upgrade	Value 1, machine upgrade	WBES
Egy_mgmt	Value 1, adopt energy management	WBES
Measure_AP	Value 1, measure air pollution control	WBES
Sales_growth	Sales growth of the company	WBES
Political_APP	Value 1, if the CEO/Manager/Board Member is politically appointed ["BMB5. Has the owner, CEO, top manager, or any of the board members of this firm ever been elected or appointed to a political position in this country?"]	WBES
D_co2Emit	Value 1, if the company emits CO_2	WBES
Audit_co2Emission	Value 1, if the company audits CO_2 emissions	WBES
Training_FT_PROD_worker	Percentage of full-time production workers who received training	WBES
Meeting_Evtmgr_evttarget	Value 1, if the environment manager is evaluated on meeting environmental targets	WBES
Domestic_PCT_sale	Domestic percentage of sales	WBES
INT_CERT	Value 1, if the company received international certification	WBES
ln_Lag3_sales	Sales of the last 3 years	WBES
Direct_expt_PCT	Percentage of the company's sales through direct export	WBES
Multi_est	Value 1, if the company has multiple establishments	WBES
ln_PPE	Natural logarithm of property, plant and equipment	WBES
PCT_Credit_SALE	Percentage of credit sales	WBES
PCT_WC_bank	Percentage of working capital financing through the bank	WBES
D_Overdraft	Value 1, if the company has overdraft facilities	WBES
Line_of_credit	Value 1, if the company has a line of credit facilities	WBES
ln_lag1FTE	Natural logarithm of last year's full-time employees	WBES
ln_lag3FTE	Natural logarithm of full-time employees of the last 3 years	WBES
BoD_Exist	Value 1, if the company forms a board of directors	WBES
Mgmt_Familymember	Value 1, if the management of a company is from a family member	WBES
Largest_PCT_OWN	Largest share ownership	WBES

Note: This table presents the definitions and data sources of the variables used in this study.

whereas a significant portion of firms (at the 50th and 75th percentiles) report no training at all. Domestic operations dominate the sample, with firms averaging 84.32% of sales within domestic markets and a median of 100%. However, 25.2% of firms have achieved international certification (INT_CERT), indicating moderate adherence to global standards. Direct exports (direct_expt_PCT) account for an average of 10.20% of sales.

The natural logarithm of lagged sales (ln_Lag3_sales) averages 14.53. Governance characteristics reveal that 36.3% of firms have a formal board of directors (BoD_Exist), whereas 35.61% of firms are managed by family members, indicating the prominence of family governance in the sample. Ownership structures are highly concentrated, with the largest ownership share averaging 80.05% and a median of 100%. These statistics illustrate the diversity in firm characteristics, governance practices and environmental accountability, providing critical context for the subsequent analysis.

In Table 4, we report the changes in green action over industries. Green action in the manufacturing, rubber and plastic industry received a score of 1.84 (out of 5), followed by service at 1.62. The results suggest that industries like manufacturing and rubber and plastic lead in green action initiatives, whereas services excel in environmental governance. Energy management

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TABLE 3 | Summary statistics.

	No. of obs.	Mean	SD	p25	p50	p75
Sales_growth	28,042	12.285	18.601	0.000	5.000	16.000
Green_action	28,042	1.279	1.424	0.000	1.000	2.000
Political_APP	28,042	0.057	0.231	0.000	0.000	0.000
D_co2Emit	28,042	0.132	0.339	0.000	0.000	0.000
Audit_co2Emission	28,042	0.042	0.200	0.000	0.000	0.000
Training_FT_PROD_worker	28,042	4.031	17.814	0.000	0.000	0.000
Meeting_Evtmgr_evttarget	28,042	0.031	0.175	0.000	0.000	0.000
Domestic_PCT_sale	28,042	84.323	30.295	85.000	100.000	100.000
INT_CERT	28,042	0.252	0.434	0.000	0.000	1.000
ln_Lag3_sales	28,042	14.531	5.476	13.337	15.425	17.687
Direct_expt_PCT	28,042	10.195	24.729	0.000	0.000	0.000
Multi_est	28,042	1.366	18.146	0.000	0.000	0.000
ln_PPE	28,042	4.178	6.380	0.000	0.000	10.597
PCT_Credit_SALE	28,042	25.908	33.898	0.000	2.000	50.000
PCT_WC_bank	28,042	9.545	19.420	0.000	0.000	10.000
D_Overdraft	28,042	0.377	0.485	0.000	0.000	1.000
Line_of_credit	28,042	0.344	0.475	0.000	0.000	1.000
ln_lag1FTE	28,042	3.286	1.353	2.197	3.000	4.174
ln_lag3FTE	28,042	3.229	1.356	2.197	2.996	4.094
BoD_Exist	28,042	0.363	0.481	0.000	0.000	1.000
Mgmt_Familymember	28,042	35.611	44.983	0.000	0.000	100.000
Largest_PCT_OWN	28,042	80.049	25.607	51.000	100.000	100.000

Note: This table provides the summary statistics for the variables used in the analysis. The columns include the number of observations (No. of obs.), mean, standard deviation (SD) and the 25th (p25), 50th (median, p50) and 75th (p75) percentiles. We define variable descriptions in Table 2.

TABLE 4 | Green action by the industry.

Industry	Temp	EG	Mac_Upgrade	Egy_mgmt	Measure_AP	Green_action
Basic Metals & M	0.08	0.02	0.52	0.18	0.06	0.85
Chemicals & Chem	0.13	0.05	0.52	0.20	0.13	1.03
Construction	0.10	0.08	0.28	0.13	0.02	0.62
Fabricated Metal	0.30	0.13	0.50	0.32	0.15	1.41
Food	0.35	0.15	0.43	0.34	0.15	1.41
Furniture	0.17	0.06	0.35	0.20	0.06	0.84
Garments	0.26	0.08	0.38	0.28	0.10	1.09
Hospitality & To	0.16	0.01	0.14	0.15	0.01	0.46
Hotels	0.49	0.06	0.22	0.22	0.07	1.07
Leather Products	0.04	0.01	0.40	0.15	0.01	0.61
Machinery & Equi	0.33	0.19	0.50	0.34	0.18	1.54
Machinery & Equi	0.09	0.02	0.56	0.20	0.03	0.90

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TABLE 4 | (Continued)

Industry	Temp	EG	Mac_Upgrade	Egy_mgmt	Measure_AP	Green_action
Manufacturing	0.45	0.16	0.61	0.39	0.23	1.84
Non-Metallic Min	0.28	0.13	0.51	0.42	0.25	1.59
Other Manufactur	0.33	0.15	0.49	0.34	0.19	1.49
Other Services	0.31	0.10	0.39	0.25	0.12	1.17
Petroleum produc	0.08	0.04	0.57	0.24	0.07	1.01
Retail	0.36	0.10	0.31	0.23	0.08	1.07
Rubber & Plastic	0.37	0.15	0.54	0.46	0.32	1.84
Services	0.46	0.23	0.47	0.30	0.15	1.62
Services of Moto	0.08	0.01	0.10	0.07	0.00	0.27
Textiles	0.33	0.10	0.39	0.32	0.24	1.38
Textiles & Garme	0.13	0.04	0.34	0.12	0.02	0.65
Wholesale & Reta	0.24	0.07	0.19	0.15	0.02	0.67
Wood Products, F	0.02	0.03	0.36	0.11	0.02	0.54
Total	0.32	0.12	0.42	0.29	0.14	1.28

Note: This table presents the green action by industry with its five climate-related initiatives. The columns represent the adoption rates for specific initiatives: Temp (equipment temperature control), EG (climate-friendly energy generation), Mac_Upgrade (machine upgrades), Egy_mgmt (energy management) and Measure_AP (air pollution control measures). Green_action is the summated score derived from these five initiatives, reflecting each industry's overall engagement in climate-related activities.

is most potent in rubber and plastic and non-metallic minerals, reflecting significant environmental focus.

4.2 | The Effect of Political Appointment on Green Action

Table 5 presents the estimation results for the effect of political appointment on green action. The stepwise regression results for the determinants of Green_action measure the firm's engagement in green initiatives. The dependent variable is Green_action, and the regressions are sequentially adjusted by introducing additional explanatory variables in each column to assess their incremental contributions. Results show that firms led by politically appointed CEOs (Political_APP = 1) exhibit a significantly higher level of green action than those led by non-politically appointed CEOs (Political_APP = 0). The economic interpretation of the findings reveals, for instance, in Column 1, the coefficient of 0.1217 implies that politically appointed CEOs are associated with an average increase of 0.1217 units in green action relative to their non-politically appointed counterparts, controlling for other variables. The consistently positive and significant coefficient on Political_APP across all specifications indicates that politically connected or aligned firms are more likely to undertake green actions. Economically, this suggests that firms may leverage political proximity to anticipate regulatory trends, secure legitimacy, or align with government-driven sustainability agendas, thereby increasing their probability of environmental engagement. Similarly, the strong positive effect of *D_co2Emit* implies that firms with higher carbon emissions are significantly more likely to adopt green actions. This reflects a regulatory pressure and reputational risk mechanism, in which environmentally exposed firms internalise external scrutiny and respond by increasing sustainability initiatives to mitigate potential penalties or legitimacy losses. The large and highly significant coefficient on *Audit_co2Emission* suggests that firms subject to environmental audits are substantially more likely to engage in green actions. This highlights the economic importance of external monitoring and compliance systems, indicating that audit enforcement serves as a strong disciplinary mechanism that drives firms towards environmental responsibility.

4.3 | The Effect of Political Appointment on Various Green Action Initiatives

In this section, we use logistic regression to identify the likelihood of adopting a range of green action initiatives (such as adopting energy management practices, energy generation, machine upgrades and air pollution measures) based on political appointments and all controls based on Equation (2). Table 6 reports the results. The relationship in Column 1 (adopting temperature control equipment) is positive but statistically insignificant, suggesting no clear link between political appointments and the adoption of temperature control equipment. In Column 2 (climate-friendly energy generation), the association is significantly positive ($p < 0.01$), indicating that political appointments increase the likelihood of adopting climate-friendly energy generation practices. In Column 3 (machine upgrades), the association remains positive and significant ($p < 0.05$), highlighting that political appointments also facilitate the adoption of machine upgrades. However, in Columns 4 (adopt energy management practices) and 5 (adopt air pollution measures), the effect of political appointments is insignificant, suggesting no

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TABLE 5 | Political appointment and green action.

DV = Green action	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Political_APP	0.1217***	0.1255***	0.0898***	0.0808**	0.0735**	0.0565*	0.0608*
	(0.00)	(0.00)	(0.00)	(0.01)	(0.02)	(0.07)	(0.05)
D_co2Emit	0.5506***	0.5494***	0.4984***	0.5015***	0.4869***	0.4607***	0.4562***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Audit_co2Emission	0.9813***	0.9829***	0.9830***	0.9778***	0.9562***	0.9617***	0.9478***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Training_FT_PROD_worker	0.0049***	0.0048***	0.0042***				0.0035***
	(0.00)	(0.00)	(0.00)				(0.00)
meetng_Evtmgr_evttarget	1.2263***	1.2322***	1.1831***	1.1992***	1.1659***	1.1171***	1.1027***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Domestic_PCT_sale	−0.0026***				−0.0012***		−0.0007*
	(0.00)				(0.00)		(0.08)
BoD_Exist	0.3743***	0.3755***	0.3540***	0.3608***	0.3386***	0.2498***	0.2413***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
INT_CERT	0.3052***	0.2991***	0.2656***	0.2801***	0.2383***	0.1646***	0.1489***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Direct_expt_PCT		0.0036***			0.0019***	0.0018***	0.0011**
		(0.00)			(0.00)	(0.00)	(0.02)
ln_PPE			0.0448***	0.0450***	0.0419***	0.0392***	0.0382***
			(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Multi_est				0.0010**	0.0011***	0.0007*	0.0007*
				(0.01)	(0.01)	(0.07)	(0.07)
D_Overdraft				0.1675***	0.1254***		0.0995***
				(0.00)	(0.00)		(0.00)
Mgmt_Familymember				0.0015***	0.0016***	0.0020***	0.0020***
				(0.00)	(0.00)	(0.00)	(0.00)
ln_Lag3_sales					0.0066***		0.0015
					(0.00)		(0.34)
PCT_WC_bank					−0.0001		−0.0002
					(0.87)		(0.59)
Line_of_credit					0.1459***	0.1495***	0.1255***
					(0.00)	(0.00)	(0.00)
ln_lag1FTE						0.1353***	0.2116***
						(0.00)	(0.00)
Largest_PCT_OWN						0.0003	0.0003
						(0.27)	(0.26)
PCT_Credit_SALE							0.0002
							(0.49)

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TABLE 5 | (Continued)

DV = Green action	(1)	(2)	(3)	(4)	(5)	(6)	(7)
ln_lag3FTE							−0.0867***
							(0.00)
Constant	1.4848***	1.2407***	1.1714***	1.0961***	1.1159***	0.6689***	0.7528***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Industry FE	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES	YES	YES
R2	0.2614	0.2621	0.2922	0.2943	0.2993	0.3079	0.3109
N	28,023	28,023	28,023	28,023	28,023	28,023	28,023

Note: This table presents the regression results of the impact of CEO political appointments on green action. Regressions include year, industry and country fixed effects. P values (in parentheses) are based on *t*-statistics. Variables are defined in Table 2.
***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

TABLE 6 | CEO political appointment and green action initiatives.

	(1) Adopt_Equip_tempcontrol	(2) Climate_friendly_engy_gen	(3) Machine_upgrade	(4) Adop_engy_mgmt	(5) Adopt_air_pol_measure
Political_APP	0.0551	0.3148***	0.1229**	−0.0152	0.0210
	(0.36)	(0.00)	(0.04)	(0.81)	(0.79)
D_co2Emit	0.4395***	0.2410***	0.3407***	0.6804***	0.9484***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Audit_co2Emission	0.6835***	1.0097***	0.6662***	0.9571***	1.4701***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Training_FT_PROD_worker	0.0033***	0.0027***	0.0060***	0.0044***	0.0022**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)
Meeting_Evtmgr_evttarget	1.0499***	1.0314***	0.8626***	1.4295***	1.4190***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Domestic_PCT_sale	−0.0016**	−0.0034***	0.0005	−0.0002	−0.0024**
	(0.03)	(0.00)	(0.52)	(0.85)	(0.02)
INT_CERT	0.0555	0.0773	0.1892***	0.2986***	0.3554***
	(0.14)	(0.13)	(0.00)	(0.00)	(0.00)
ln_Lag3_sales	0.0040	−0.0061	−0.0024	0.0109***	−0.0018
	(0.18)	(0.15)	(0.42)	(0.00)	(0.66)
Direct_expt_PCT	−0.0005	0.0005	0.0016*	0.0024**	0.0008
	(0.56)	(0.66)	(0.09)	(0.01)	(0.50)
Multi_est	0.0014	0.0018*	0.0006	0.0001	0.0006
	(0.14)	(0.06)	(0.47)	(0.88)	(0.57)
ln_PPE	0.0325***	0.0200***	0.0984***	0.0339***	0.0169***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
PCT_Credit_SALE	−0.0001	−0.0016**	0.0027***	−0.0020***	0.0000
	(0.87)	(0.02)	(0.00)	(0.00)	(0.98)

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TABLE 6 | (Continued)

	(1) Adopt_Equip_tempcontrol	(2) Climate_friendly_engy_gen	(3) Machine_upgrade	(4) Adop_engy_mgmt	(5) Adopt_air_pol_measure
PCT_WC_bank	−0.0010	−0.0007	−0.0010	0.0008	0.0012
	(0.19)	(0.51)	(0.20)	(0.33)	(0.28)
D_Overdraft	0.1712***	0.2667***	0.0842**	0.1333***	0.1476***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Line_of_credit	0.1490***	0.1324***	0.2622***	0.1195***	0.0741
	(0.00)	(0.01)	(0.00)	(0.00)	(0.13)
ln_lag1FTE	0.3097***	0.3050***	0.3737***	0.2273***	0.2098***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
ln_lag3FTE	−0.1439***	−0.1282*	−0.1947***	−0.0823*	−0.0162
	(0.00)	(0.06)	(0.00)	(0.10)	(0.80)
BoD_Exist	0.3138***	0.4623***	0.1510***	0.4228***	0.4302***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Mgmt_Familymember	0.0031***	0.0037***	0.0022***	0.0025***	0.0041***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Largest_PCT_OWN	−0.0004	0.0009	0.0013**	−0.0012**	0.0009
	(0.48)	(0.26)	(0.02)	(0.04)	(0.25)
_cons	−1.9667***	−2.8847***	−0.6027***	−1.8983***	−3.0495***
	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Industry FE	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Country FE	YES	YES	YES	YES	YES
R2_p	0.1278	0.1528	0.1796	0.1582	0.2295
N	28,023	28,023	28,023	28,023	28,023

Note: This table presents the logistic regression results of the impact of CEO political appointments on green action initiatives. P values (in parentheses) are based on *t*-statistics. Variables are defined in Table 2.
***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

clear association between these appointments and the specific green actions. Thus, political appointments significantly promote specific green initiatives, particularly in energy generation and machine upgrades, but not consistently across all green action measures.

4.4 | Political Appointment, Green Action and Firm Performance

To investigate the role of green action in enhancing the positive effect of political appointments, we conduct a two-stage instrumental variable regression (2SLS) addressing the issue of endogeneity motivated from Ozkan et al. (2023). In the first stage, we predict the green action variable (Predicted_Green_action) using two additional control variables, namely Green_action_industry and Green_action_country and use the predicted green action value (Predicted_Green_action) in our second-stage regression. The first-stage regression results are reported in Column 1 of Table 7. The results suggest that Green_action_country significantly determines the corporations' current green action.

The second-stage results are reported in Column 2 of Table 7. First, the positive estimated coefficients of Political_APP support the view that, on average, politically appointed executives enhance the company's sales growth. The results are in line with the findings of (Hillman et al. 1999). Second, a significant relationship between Predicted_green_action and sales growth is observed. On the other hand, the estimated coefficient of the interaction term (Political_APP×Predicted_Green_action) is negative and significant. The economic significance of these results indicates that the positive impact of Predicted_Green_action on Sales_growth decreases when a CEO is appointed politically. The interplay of political appointments appears to dilute the positive effect of active green initiatives. A previous study claims that this occurs because of resource misallocation (Fan et al. 2007). In line with Hypothesis 2, the findings support the notion that firms fail to

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TABLE 7 | CEO political appointment, green action and firm performance.

	First stage (1) Green_action	Second stage (2) Sales_growth
Political_APP	0.0608*	1.6346*
	(0.05)	(0.10)
Predicted_Green_action		37.7129***
		(0.00)
Political_APP × Predicted_Green_action		−1.0087**
		(0.04)
D_co2Emit	0.4562***	−17.3598***
	(0.00)	(0.00)
Audit_co2Emission	0.9478***	−35.8955***
	(0.00)	(0.00)
Training_FT_PROD_worker	0.0035***	−0.1246***
	(0.00)	(0.00)
Meeting_Evtmgr_evttarget	1.1027***	−41.9667***
	(0.00)	(0.00)
Domestic_PCT_sale	−0.0007*	0.0380***
	(0.08)	(0.00)
INT_CERT	0.1489***	−5.1631***
	(0.00)	(0.00)
ln_Lag3_sales	0.0015	0.0359
	(0.34)	(0.14)
Direct_expt_PCT	0.0011**	−0.0179**
	(0.02)	(0.04)
Multi_est	0.0007*	−0.0272***
	(0.07)	(0.00)
ln_PPE	0.0382***	−1.3742***
	(0.00)	(0.00)
PCT_Credit_SALE	0.0002	0.0073*
	(0.49)	(0.05)
PCT_WC_bank	−0.0002	0.0365***
	(0.59)	(0.00)
D_Overdraft	0.0995***	−4.2565***
	(0.00)	(0.00)
Line_of_credit	0.1255***	−4.4663***
	(0.00)	(0.00)
ln_lag1FTE	0.2116***	−8.4360***
	(0.00)	(0.00)
ln_lag3FTE	−0.0867***	3.1318***
	(0.00)	(0.00)
BoD_Exist	0.2413***	−8.2019***
	(0.00)	(0.00)
Mgmt_Familymember	0.0020***	−0.0599***
	(0.00)	(0.00)
Largest_PCT_OWN	0.0003	−0.0065
	(0.26)	(0.16)
Green_action_industry	0.6090	
	(0.12)	
Green_action_country	−1.035***	
	(0.00)	
Constant	1.6699***	−6.3606*
	(0.00)	(0.08)
Industry FE	YES	YES
Year FE	YES	YES
Country FE	YES	YES
R^2	0.3109	0.1075
N	28,023	28,023

Note: This table presents the regression results of the mediating impact of green action on the relationship between CEO political appointment and firm performance. Regressions include year, industry and country fixed effects. P values (in parentheses) are based on *t*-statistics. Variables are defined in Table 2. ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

incorporate executives' political networks into sales performance when initiating green actions. This finding is similar to that of Marie et al. (2024), who report that politically connected CEOs demonstrate a weaker connection between ESG practices and financial performance.

4.5 | The Role of Legal Status, Fair Justice and Business Environment

We extend our analysis by splitting our samples into three subsamples, assessing whether our main findings vary by legal status, judicial system fairness and business environment obstacles. We then reestimate Equation (2). Table 8 presents the results for each subgroup. In line with our earlier findings, the estimated association between green action initiatives and sales growth performance is not convincing. Our results show a significant

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TABLE 8 | Political appointment, green action and firm performance: The role of legal status, fair court system and business environment.

	(1)	(2)
DV = Sales_growth	**Public**	**Non-public**
Political_APP	5.9489	0.7657
	(0.10)	(0.48)
Predicted_Green_action	43.8342	37.4818***
	(0.23)	(0.00)
Political_APP × Predicted_Green_action	−3.1675**	−0.6178
	(0.01)	(0.27)
Constant	YES	YES
Controls	YES	YES
Industry FE	YES	YES
Year FE	YES	YES
Country FE	YES	YES
R^2	0.1281	0.1098
N	1844	26,179
Panel B: Fair court system		
	(1)	(2)
DV = Sales_growth	**Agree—fair court system**	**Disagree—fair court system**
Political_APP	3.0184**	−0.3213
	(0.02)	(0.83)
Predicted_Green_action	42.4443***	33.7823***
	(0.00)	(0.00)
Political_APP × Predicted_Green_action	−1.4281**	−0.2023
	(0.03)	(0.79)
Constant	YES	YES
Controls	YES	YES
Industry FE	YES	YES
Year FE	YES	YES
Country FE	YES	YES
R^2	0.1246	0.1008
N	13,379	14,644
Panel C: Business environment obstacle		
	(1)	(2)
DV = Sales_growth	**Political instability**	**Others**
Political_APP	6.1862	1.6211
	(0.16)	(0.11)
Predicted_Green_action	−24.5747	37.1905***
	(0.23)	(0.00)
Political_APP × Predicted_Green_action	−1.7662	−0.9633*
	(0.34)	(0.07)
Constant	YES	YES
Controls	YES	YES
Industry FE	YES	YES
Year FE	NO	NO
Country FE	NO	NO
R^2	0.0779	0.1131
N	1880	26,143

Note: This table presents the regression results for the mediating effect of green action on the relationship between CEO political appointment and firm performance across various subsamples. Panel A presents the results of public versus non-public firms. Panel B presents the results of agreement and disagreement on the fair-court system. Panel C presents the results of a business environment that is an obstacle, based on political instability and other factors. Regressions include year, industry and country fixed effects. P values (in parentheses) are based on *t*-statistics. Variables are defined in Table 2. ***, ** and * denote significance levels of 1%, 5% and 10%, respectively.

relationship between green action and sales growth in non-public firms, not in public firms. Similarly, the positive effect of political appointments on sales growth is important only when the court system is fair.

We report mixed results of international terms. We find a similar association between political appointments and green actions and sales growth in public firms. Panel C of Table 8 reports no significant difference in our main findings based on judicial justice. Panel C of Table 8 reports that green actions significantly improve firm performance under other business obstacles, although their interaction with political ties weakens this effect. These findings align with empirical studies such as Fisman (2001) and Fan et al. (2007), which emphasise the conditional benefits of political connections, and Berrone et al. (2013), which highlight the performance-enhancing role of green innovation.

5 | Conclusions

In this study, we examined how political appointments affect firm sales performance and the role of green action in mediating their impact. In the first stage, we attempted to establish the association between political appointments and green action initiatives. Controlling for other factors likely to affect green action, we showed that firms respond to political appointments by engaging more in green action initiatives, supporting the notion that green action can be considered a

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response to political appointments. In the second stage, we analysed the effect of political appointments on firm sales performance. We examined whether green action initiatives affect the positive impact of political appointments on firm sales performance. We find that political appointment is positively associated with corporate green action initiatives. However, during green action initiatives, the role of politically appointed executives weakened. Our main findings support the view that green action has political appointment risk. The analysis so far contributes to the previous research on sustainable and firm performance relationships (Correa-Mejía et al. 2024; Goyal et al. 2013; Ionascu et al. 2018; Liu 2024; Lu et al. 2024) by identifying green action as a way of considering the adverse effect of political appointment on sales growth performance. Our results show that politically appointed executives are more likely to adopt green initiatives, consistent with Li et al. (2024) and Kim (2024), who find that political orientation and political liberalism enhance environmental performance. However, we extend this literature by demonstrating that political appointment itself, regardless of ideology, drives green action and that green action mediates (not moderates) the political appointment–performance relationship. This mediation effect is novel and has not been examined in prior WBES or political connection studies. In this respect, it also contributes to the literature exploring the potential effects of green action initiatives.

We extended our main findings in important ways. First, we investigated whether the mediating effect of green action differs between public and non-public firms. We argued that public firms have the most politically appointed CEOs, and the relationship differs between public and non-public firms. To capture this, we separate the sample into public versus non-public firms. The results show that the mediating effect of green action is more pronounced in public firms. Conducting this analysis in the context of political appointment is a novel approach, and the findings suggest that in assessing the relevance and value of green action, the legal status of the firms should be added as an additional dimension.

The findings of our study are helpful to both public and private firms for evaluating the expected impact of political appointments and the benefits of taking climate action initiatives. Our findings can help policymakers incorporate public and private firms, providing regulatory frameworks to initiate green initiatives. In this respect, our study provides an additional perspective, enriching the understanding of the importance of green action initiatives. Importantly, our analysis also provides a valuable setting in which the relevance of green action can be investigated after the Paris Agreement. Therefore, an interesting avenue for future research would be to examine the cost of green initiatives after the Paris Agreement and its effect on firm-level performance.

As with other studies on green initiatives (Iguchi et al. 2021; Paudel et al. 2024; Saeed et al. 2024; Waris et al. 2024), our study is constrained by limitations in the dataset. Our analysis relies on data from the World Bank Enterprise Survey for the MENA region, which includes 41 countries. Although this dataset provides rich insights into firm-level operations and challenges, it does not include comprehensive measures specific to green action initiatives or the political connections of executives, such as CEOs. Therefore, the reliability of our findings depends on the proxy variables derived from the survey data to represent these constructs. Although the survey provides a snapshot of sales growth as a measure of firm performance, it does not track changes in firm performance, political appointments, or green initiatives longitudinally. Incorporating panel data could enhance our understanding of these relationships over time. Furthermore, the study focuses exclusively on the MENA region, which may limit the generalisability of our findings to other regions with different economic, political and environmental contexts. The cultural and regulatory variations across regions could influence the relationship between political appointments, green initiatives and firm sales performance differently. Another limitation relates to the primary dependent variable, firm sales growth, which may not fully capture all dimensions of firm performance. Broader performance indicators, such as profitability, Tobin's *Q* and managerial efficiency, could provide additional insights into the impact of political appointments and green initiatives. Lastly, although we control for limited factors, unobserved heterogeneity may still influence our results. Incorporating more alternative measures of green action initiatives and political connections could improve the robustness and interpretability of our findings.

Our findings indicate that adopting energy management practices and upgrading machines significantly increase the likelihood of green initiative adoption, highlighting the critical role of energy efficiency in driving corporate sustainability. The findings from this study will have significant implications for policymakers, corporate boards and stakeholders. Understanding the interplay between political connections and green actions can help firms align their strategies with societal expectations while ensuring sustainable performance. Furthermore, these insights highlight the importance of governance structures that balance political influence and corporate objectives.

We specifically focus on key sustainability measures, including adopting temperature-control equipment, adopting climate-friendly energy generation, upgrading machines, implementing energy management and addressing air pollution. By exploring how political appointments influence green action initiatives, the study offers valuable insights into the leadership driver behind firms' green actions and their alignment with ESG goals. Our findings suggest that politically appointed CEOs can leverage political connections to navigate political and social pressures, shaping green initiatives. However, the mediating effect of the green actions adopted by political appointees results in lower sales growth.

Our findings also highlight the potential drawbacks of political influence in driving sustainability efforts. Although political connections can foster environmental initiatives, the strategic focus on political benefits might lead to less productive firms benefiting disproportionately from green investments, limiting overall sales growth. Furthermore, reliance on political networks may reduce firms' incentives to innovate independently, potentially stifling competition and market efficiency.

In conclusion, this paper contributes to the growing body of literature on the intersection of corporate governance, political connections and environmental sustainability. By examining how political appointments affect firms' green initiatives, we provide a nuanced understanding of the mechanisms that link

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governance structures to sustainability outcomes. Future research could further explore the broader welfare effects of politically motivated green actions and assess whether such initiatives contribute to long-term economic and environmental benefits. Additionally, this framework can be adapted to analyse the effects of political ties in different institutional contexts, broadening our understanding of the role of governance in shaping firms' responses to environmental challenges. Our findings imply that politically influenced firms can strategically leverage green initiatives to enhance legitimacy and mitigate performance risks associated with political appointments. Policymakers may use this insight to design governance frameworks that encourage environmental compliance among politically connected firms. Investors and boards can also use green action as a signal of responsible governance in politically embedded environments.

Funding

This work was supported and funded by the Deanship of Scientific Research at Imam Mohammad Ibn Saud Islamic University (IMSIU) (grant number IMSIU-DDRSP2602).

Ethics Statement

Ethical approval was not required for this study as it did not involve human or animal participants.

Conflicts of Interest

The authors declare no conflicts of interest.

Endnotes

[1] Sampled responses are from basic metals and materials, chemicals and chemicals, construction, fabricated metal, food, furniture, garments, hospitality and tourism, hotels, leather products, machinery and equipment, manufacturing, non-metallic minerals, other manufacturing, other services, petroleum products, retail, rubber and plastic, services, services of motor vehicles, textiles, textiles and garments, wholesale and retail and wood products. The data period is from 2018 to 2020 for three reasons: (1) data availability of key variables, (2) comparability and measurement consistency and (3) alignment with the institutional context relevant to our research question.

[2] We restrict our analysis to 41 Middle Eastern and North American countries because these are the only countries for which all five green-action variables are consistently available. The construction of our green-action index requires complete information on temperature-control equipment, climate-friendly energy generation, machinery upgrades, energy management adoption and air pollution control measures.

[3] Although the dataset spans up to 2020, this limitation is offset by the enduring relevance of the study's core variables—political appointments and green action initiatives—which remain central to contemporary ESG discourse and corporate governance. The findings offer timely insights into the strategic role of environmental initiatives in politically influenced firms, with implications that extend well beyond the data horizon.

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