

CORPORATE STRATEGY AND ESG PERFORMANCE: THE ROLES OF PROSPECTOR AND GROWTH STRATEGIES

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Abstract

This study examines the effects of prospector and firm growth strategies on ESG performance and the moderating effect of prospector strategy on the relationship between firm growth and ESG performance. The research is based on Miles and Snow's Strategic Typology, the Resource-Based View, Stakeholder Theory, and Dynamic Capability Theory and examines whether firms pursuing innovation and growth perform better in sustainability. A balanced panel dataset comprising 60 firms and 480 firm-years during 2018-2025 was used in this context. Diagnostic tests and the Panel Corrected Standard Errors (PCSE) were employed. The results indicate that the prospector strategy and the firm growth strategy both have a significant negative effect on ESG performance, suggesting that the negative relationship between the prospector strategy and firm growth becomes stronger as the prospector strategy increases. The study findings indicate that innovation and growth alone are not enough to improve sustainability performance and that they should be strategically aligned with ESG goals to create sustainable value over the long term. The results contribute to the strategic management and sustainability literature by providing novel evidence on the intricate relationship between strategic orientation and corporate ESG performance.

Introduction

In today's world, Environmental, Social, and Governance (ESG) metrics have become a key factor in corporate research, underscoring their critical role in shaping companies' legitimacy, sustainability, and competitive advantage (Gomez-Trujillo et al., 2024). The practice of ESG has transitioned from a voluntary disclosure (Whitelock, 2015) to a strategic competency that affects investment decisions (Sultana et al., 2018), stakeholder trust (Ganc et al., 2026), and financial outcomes (Chen et al., 2023). Recent empirical evidence suggests that firms with higher ESG performance experience improved operational efficiency (Aroul et al., 2022), lower cost of capital (Tron et al., 2025), and enhanced resilience to market shocks (Wang et al., 2024). This has therefore made it imperative that understanding the strategic

drivers of ESG performance be a critical research priority.

In addition to external pressure from institutions, strategic management literature emphasizes that internal strategic orientation also affects ESG outcomes (Noch, 2025). Miles and Snow's strategic typology (Miles et al., 1978), with the prospector strategy, is among the most influential frameworks for innovation, risk-taking, and proactive market exploration. Prospector companies are more likely to embrace sustainability-oriented actions due to their dynamic capabilities, ongoing product development, and adaptability to environmental changes (Maury, 2022). Likewise, a systematic growth approach (defined as a sustained increase in revenue, assets, and market share) has increasingly been associated with sustainability engagement (Viardot, 2026). Growth-oriented firms tend to have more financial slack and

organizational capacity to invest in ESG-related activities, such as green innovation, social responsibility programs, and governance reforms (Pistolesi et al., 2026). The more growth is linked to ESG consequences, the more theoretical differences exist, with fragmented consensus on the effect of growth on sustainability outcomes (Goyal et al., 2013). There is a growing number of recent studies suggesting that ESG should not be seen as an individual corporate responsibility mechanism but rather as the result of interactions between firm strategy and resource allocation patterns (Clément et al., 2025). Combining prospector orientation and growth strategy, then, provides a more comprehensive explanation of ESG heterogeneity among firms. The rationale for this study is the growing need to identify connections between strategic management theory and the sustainability literature (Negrão et al., 2024). While there has been an increasing amount of research on ESG, the majority of this research focuses on governance structures, institutional mechanisms, or financial factors and does not treat strategic orientation as a central explanatory variable (Clément et al., 2025). In theory, the prospector strategy should correlate well with ESG performance, as companies that are more innovative than their rivals are more likely to adopt environmental technologies, pursue social innovation, and implement new governance systems (Zhou et al., 2023). Empirical results, however, have been mixed, suggesting that ESG outcomes may not be driven solely by prospector orientation. Likewise, a strong growth strategy has been associated with positive and negative ESG impacts (Setiarini et al., 2023). Growth offers opportunities for sustainability investments, but it can also lead to rising environmental pressures and governance complications, which can diminish ESG performance if not managed wisely (Kotsantonis et al., 2016). This dual aspect indicates the need for a more sophisticated analysis. Moreover, moderation effects have also been highlighted in ESG studies, which contend that the impact of ESG outcomes is largely determined by interaction effects, in addition to direct effects (Nirino et al., 2021). However, the moderating effects of the prospector and growth strategies on ESG performance are under-researched. For

this, it is necessary to develop a more holistic strategic ESG framework that not only clarifies the impact of strategy but also how strategic orientations interact to create sustainability results.

The first aspect is that previous research has focused mainly on analyzing how ESG affects firm performance (Halid et al., 2023) rather than treating ESG as a dependent outcome shaped by strategic orientation (Lichtenthaler, 2025). This hampers the ability to grasp ESG as a strategically built capability. Secondly, while prospector strategy has been extensively researched in the fields of innovation and performance (Maury, 2022), research directly examining the connection between prospector strategy and ESG performance as a key outcome variable remains limited. The financial aspect of this usually receives the majority of the research focus, leaving sustainability aspects under-researched. Thirdly, the firm's growth strategy is mostly analyzed in isolation from other strategic typologies. Therefore, the growth orientation and prospector behavior regarding ESG remain inconclusive. Fourth, there is a lack of integrative models that explore dual moderation effects, in which the relationship between the growth strategy and the prospector strategy, and the relationship between the firm's behavior and the ESG outcomes, are both strengthened. It is one of the major theoretical gaps in the strategic ESG literature. Last, but not least, current studies tend to focus on developed economies (Setiarini et al., 2023). In contrast, studies remain limited, even as the role of financial markets in sustainability issues becomes increasingly relevant.

Literature Review

Over the last decade, the body of literature on Environmental, Social, and Governance (ESG) performance has grown rapidly, evolving from a niche corporate social responsibility (CSR) topic (Gillan et al., 2021) into a central pillar of strategic management and financial research (Noch, 2025). ESG is now well known as a multidimensional construct that reflects firms' environmental responsibility, social engagement, and governance quality (Clément et al., 2025). Initial ESG research focused predominantly on external institutional factors

(e.g., regulation, stakeholder pressure, market incentives) and financial performance (Gillan et al., 2021). However, recent studies have been able to consistently confirm that ESG performance is linked to lower risk exposure (Cornell, 2021); higher financial stability (Choi et al., 2024); better firm valuation (Narula et al., 2023); and internal organizational factors like leadership, innovation capacity, and strategic orientation (Niu et al., 2022). Such a transition has provided the opportunity to investigate the link between business strategy (particularly prospector orientation and growth strategy) and ESG outcomes.

ESG performance has gone from a disclosure to a core capability integrated into the business of companies (Liang et al., 2022). ESG is perceived as the result of dynamic capabilities, resource allocation, and strategic alignment. Companies with higher ESG ratings are more likely to leverage sustainability in their decision-making processes. A growing body of research shows that ESG is positively linked to financial performance, firm resilience, risk reduction, and innovation capacity (Huang, 2021). In resource-constrained companies, ESG investments have been linked to short-term burdens and lower profitability (Jaiswal & Kumar, 2026). This inconsistency may mean that ESG results are highly dependent on internal strategic parameters. Chevrollier et al. (2020) examine how firms' strategic orientations influence ESG performance, drawing on stewardship theory. Based on an analysis of 179 listed companies (2009–2016), the findings show that stewardship-oriented firms achieve higher ESG performance. The relationship is strengthened under the Rhine economic model and weakened under the British model, highlighting the importance of institutional context.

The prospector strategy was developed within the strategic typology of Miles and Snow and is a strategy in which a company is 'proactive and innovation-oriented' in its approach to market opportunities (Walker, 2013). Companies that have such a strategy generally are noted for continuously innovating their products, investing heavily in R&D, decentralizing decision-making, and paying close attention to environmental scanning and experimentation (Eklund, 2022). In the modern strategic

management literature, the concept of prospector strategy is increasingly grounded in the dynamic capability perspective, which describes how firms adapt to the shifting technological and institutional landscape by proactively reconfiguring their resources (Herusetya, A., & Suryadinata, 2022). This strategic approach contrasts with that of defender firms, which focus on efficiency, cost control, and operational stability rather than innovation and exploration (Menguc & Auh, 2008).

In practice, prospector strategy is not directly observed but is more often estimated by measurable firm-level indicators. Commonly used proxies are research and development (R&D) intensity, advertising intensity, product diversification, intangible asset ratio, and innovation output (patents). R&D intensity is generally regarded as the most important proxy because it reflects a firm's commitment to exploratory innovation. Firms with higher R&D investment relative to their sales are typically considered prospectors, as they focus on future-oriented capability building. Likewise, advertising intensity is used to represent market exploration/differentiation strategies, since prospectors are more likely to invest time and resources in brand development and customer engagement (Maury, 2022). Product diversification and the ratio of intangible assets also demonstrate strategic flexibility and innovation-driven asset structures, which are key to prospector behavior (Peng, 2020).

From a theoretical perspective, the prospector strategy is expected to positively affect ESG outcomes because it emphasizes innovation and adaptability. In ESG theory, the strategy is expected to positively impact environmental, social, and governance outcomes, as this is the essence of the prospector strategy (Ding, 2025). Companies that innovate continuously are more likely to be environmentally oriented, develop sustainable products, and have advanced governance structures (Bataneh et al., 2024). This is consistent with recent empirical research, which indicates that innovation-intensive companies achieve better environmental outcomes and higher-quality ESG disclosures. The rationale for this link is that the greater the absorptive capacity of these innovation-oriented

companies, the more they can embed sustainability into their business models rather than treat it merely as a compliance requirement, as reflected in the ESG movement (Wang et al., 2025). Zhou et al. (2026) examine how ESG disclosure influences Responsible Consumption and Production (RCP) among 689 manufacturing firms in the MENA region (2010–2022). Using Diffusion of Innovation theory and multiple econometric techniques, the findings show that environmental and social disclosures significantly improve sustainable production, whereas governance disclosures have a negative effect. The ESG-RCP relationship follows an inverted U-shape, indicating diminishing returns at high disclosure levels. Institutional quality and ESG maturity strengthen these effects, highlighting the importance of context-specific sustainability policies and disclosure frameworks.

Panda and Ray (2025) find that CSR disclosure alone does not improve firm performance. However, when aligned with innovation and market expansion strategies, CSR creates value, highlighting the importance of strategic integration in regulated environments. Thus, CSR disclosure alone does not improve firm performance. However, when aligned with innovation and market expansion strategies, CSR creates value, highlighting the importance of strategic integration in regulated environments. However, the empirical evidence is not consistent. Several studies have found a positive correlation between prospector-oriented behavior and ESG performance (Lu et al., 2026), while the connection is limited and context-dependent. Based on the above, we conclude that the prospector strategy does not automatically lead to ESG improvement without suitable innovation pathways. This indicates an important weakness in the literature: it often overestimates the direct impact of the prospector strategy while neglecting factors that shape it, such as organizational culture, financial constraints, and institutional pressures.

Furthermore, some studies suggest that prospector strategy could even lead to ESG trade-offs. Due to resource dilution effects, prospector firms may not have the capacity to maintain consistent investment in ESG initiatives. Consideration of market growth and

technological innovation can take precedence over sustainability under highly competitive conditions (Bertelli & Torricelli, 2024). Corporate governance quality and transparency may be reduced due to increased operational risk, especially in less-developed markets where institutional supervision is less robust, if the company adopts an aggressive approach to innovation (Wang & Zhang, 2023).

Arguably, the sustainability literature indicates that the effects of the prospector strategy on ESG are not necessarily consistent across contexts but are context-specific and context-dependent. Moreover, regulatory pressures and stakeholder scrutiny may lead to better alignment between innovation strategy and ESG performance among companies in environmentally sensitive industries (Rini et al., 2026). On the other hand, in less-regulated industries, prospector innovation may focus on profit-driven rather than sustainable innovations, reducing its ESG impact. Moreover, the mixed results can be seen through the lens of dynamic capability theory. From this perspective, a prospector strategy improves ESG performance only when it includes complementary capabilities, such as knowledge integration systems, good governance mechanisms, and stakeholder engagement systems. Innovation may not lead to sustainability outcomes without these complementary capacities (Yuan & Cao, 2022). This is a partial reason for the weak or inconsistent direct effects reported in empirical research.

Firm growth strategy is a deliberate approach by a firm to increase its size, market share, revenue, and assets over time. The concept of growth is not only a result of strategic management in strategic management literature, but it is also a strategic option, which is a strategic preference of the managers to expand, penetrate the market, and accumulate resources. Growth companies tend to focus on expansion, new market opportunities, manufacturing capacity expansion, and enhancing their competitive position (Rodrik & Stiglitz, 2025). In the field of sustainability research, growth is an important topic because of its direct impact on resource availability, stakeholders' visibility, and environmental footprint, which affect the

sustainability outcomes of Environmental, Social, and Governance (ESG) (Lin, 2024).

However, growth strategy is difficult to measure and operationalize in the empirical world because it is multidimensional. The most frequently cited proxies in the literature are revenue growth, increases in assets (Qiao et al., 2022), and increases in employees (Yin et al., 2026). Sales growth is the most common metric, as it indicates market growth and demand-side success. The growth of assets measures the increase in the firm's productive capacity and investment intensity, and the growth of employees measures the scaling up of the organization and the growth in the number of workers. Compound annual growth rate (CAGR), the average annual growth rate of assets over time, is also used in some studies to emphasize consistent growth rather than temporary fluctuations. Each proxy, however, has methodological limitations that hinder the interpretation of the collected data. Measurement issues introduce inconsistencies in empirical results and complicate the analysis of the actual impact of a growth strategy on ESG performance. This has resulted in frequent mix-ups between the terms "growth outcomes" and "growth strategy" in the literature, creating conceptual confusion.

Theoretically, growth strategy is hypothesized to positively impact ESG performance, but this effect is expected to operate through various channels (Singh & Tarkar, 2024). First, growth provides firms with more resources to invest in environmental technologies, social programs, and governance systems. Sustainability reporting systems, emissions-reduction technologies, and corporate social responsibility programs are likely to be more costly, and larger companies may have more financial resources to invest in such initiatives. Second, increased growth heightens firm visibility and stakeholder scrutiny, prompting more pervasive ESG practices to preserve legitimacy (Rasool et al., 2025). Third, growing companies are likely to be multi-market, with different institutional pressures in each market, which incentivizes them to standardize and adhere to ESG principles (Linnenluecke, 2022).

Evidence supporting the theory that growth can improve ESG performance is generally available,

although not always consistent. Multiple studies focus on the positive impact of firm growth on sustainability results, especially in developed markets where institutional pressures are high. For instance, when firms' sales growth is higher, they have greater investment capacity and managerial sophistication, which lead to better environmental performance (Hussain et al., 2025). Likewise, businesses that are growing quickly are more likely to have a formal ESG reporting system in place to appease institutional investors and mitigate information asymmetry (Rauf et al., 2024). Furthermore, the link between growth and ESG is highly dependent on the institutional and industry environments. In industries such as energy, manufacturing, and chemicals, it can be difficult to grow without worsening environmental degradation unless regulations are strictly enforced or technological advancements are made (Zhong et al., 2022). Service-oriented or knowledge-based sectors, on the other hand, can grow with lower environmental impact, potentially leading to a positive correlation with ESG (Choi et al., 2024). Another major topic in the literature is that growth is perceived as an external factor in ESG performance, but it can, in fact, be a driver of performance. Companies with good ESG scores can benefit from better reputation (Feng et al., 2025), investor confidence (Sharma et al., 2025), and stakeholder trust (Foley et al., 2024), which can lead to increased growth. This reverse causality makes it difficult to interpret the empirical findings and introduces endogeneity problems. ESG and firm growth are interconnected, particularly in capital markets, where sustainability performance or practices affect access to capital and growth opportunities (Rasool et al., 2025).

Moreover, much of the literature excludes the temporal component of growth effects. The benefits of ESG in growth strategies may be lagged rather than immediate, as it may take time for companies to incorporate sustainability systems into their expanding operations. The effects of such dynamic adjustments are either inconsistent or underestimated in cross-sectional studies (Wu et al., 2025). Another drawback of previous research is the lack of connection between growth strategy and other strategic orientations. Growth is treated

separately from other factors such as innovation orientation, governance, and market strategies. This piecemeal approach constrains theory development because growth is not the only driver of firms' resource allocation to ESG-related activities. Recent publications indicate that innovation-based approaches can amplify growth impacts, as innovation serves as the technological basis for sustainable growth (Nguyen et al., 2025). However, a critical perspective can be taken that the growth strategy's effect on ESG performance is paradoxical. On the other hand, growth is key to enhancing the financial and organizational resources essential to ESG investing. Conversely, fast growth can overwhelm resources, exacerbate environmental effects, and undermine governance structures. This duality accounts for the context-dependent and sometimes mixed empirical results. It also highlights the need to understand growth strategy not in isolation but embedded in a broader strategic configuration (innovation orientation and governance quality) (Singh & Tarkar, 2024).

The relationship between strategic orientation and ESG performance is better understood through a contingency perspective rather than isolated direct effects. The combination of the two may yield more or less sustainable performance, depending on how well they are aligned. However, neither strategy alone has a positive impact on the ESG outcome. This is in accordance with the strategic fit argument, which posits that the effects of firms' internal strategies are maximized when they are complementary and interact with one another rather than operating independently. The prospector strategy focuses on innovation. However, innovation alone is not enough for ESG success, as sustainability programs need to be financially and operationally scalable. If they do not have this, their efforts on ESG can be merely symbolic or scattered. This capacity is provided by the firm's growth strategy, which involves increasing financial resources, operational scale, and organizational reach. As companies expand, ESG practices can be formalized at the corporate level and across various business lines and countries. As companies scale, they can establish ESG practices at the corporate level and in multiple

business lines and countries. However, growing without an innovation orientation can create environmental inefficiencies, governance complexities, and a lack of sustainability integration (Muany, 2022). Therefore, growth is not enough to achieve good ESG performance. There is potential synergy between prospector and growth strategies. Prospector firms create the innovations that deliver sustainability benefits, and growth-oriented firms enable the innovations to be scaled and integrated across operations. If both strategies are in place, a company will be more likely to achieve better ESG performance, as innovation will be developed and implemented at scale. The moderating logic is consistent with dynamic capability theory, which posits that, to achieve sustainability outcomes, firms need the ability to build new capabilities (prospector orientation) and reconfigure their resources for scaling (growth orientation). The greater the innovation capability and the growth capacity, the more a company will excel in ESG performance. However, this relationship can sometimes be negative. Growth can be so rapid that it strains managerial resources, undermining the effectiveness of innovation-driven ESG efforts. If innovation moves too quickly without adequate scaling capacity, it can constrain ESG efforts. So, the interaction between prospectors and growth depends on strategic balance and organizational capability (Kathuria & Lucianetti, 2024).

Methodology

This study integrates Miles and Snow's strategic typology, stakeholder theory, and the ESG performance literature to explain how prospector and growth strategies shape ESG outcomes (Miles & Snow, 1978; Freeman, 1984; Eccles et al., 2014). Prospector firms emphasize innovation, opportunity-seeking, and strategic aggressiveness, which enhance their capacity to develop ESG-related practices and respond proactively to emerging stakeholder expectations (Miles & Snow, 1978; Shortell & Zajac, 1990). From a stakeholder-theory perspective, ESG performance reflects how firms manage relationships with key stakeholder groups; prospectors, being more outward-looking and adaptive, invest in environmental and social initiatives to secure legitimacy, reduce

non-financial risks, and access critical resources (Freeman, 1984; Eccles et al., 2014). The population of this research comprises publicly

listed non-financial companies on the selected stock market for the period 2022-2025.

Table 1: Variables

Variable	Proxy	Data Source
Dependent Variable		
Corporate Social Responsibility	ESG Score	Reuters
Independent Variables		
Growth	The annual percentage change in firm sales.	Reuters
Prospector Strategy	(R&D/Sales) + (Advertising expense/Sales) – (Depreciation + Depletion + Amortization /Sales)	Reuters
R&D Intensity	Research and development expenses divided by sales.	Reuters
Advertising Intensity	Advertising expenses divided by sales.	Reuters
Capital Intensity	Depreciation, amortization, and depletion divided by sales.	Reuters
Control Variables		
Firm Size	Log of Total Assets	Reuters
Firm Age	The logarithm of years since incorporation	Reuters
Leverage	Total debt to total assets	Reuters
ROA	Net profit/ Total Assets	Reuters

Result and Discussion

Descriptive Statistics

The descriptive statistics of the variables used in this study are presented in Table 2. The average ESG score is 54.74, indicating that the sampled firms' sustainability performance is at a moderate level. The standard deviation, however, is high (21.04), indicating a high disparity in ESG practices across the companies. The range of ESG scores is from 2.33 to 93.67, indicating that ESG implementation is at a relatively early stage in some companies and at a more advanced stage in others. The prospector strategy is the mean; most firms exhibit a relatively low level of innovation-oriented strategic behavior, namely 0.042. However, the highest score of 0.591 indicates that many

companies are very forward-looking in their strategic directions, have adopted an innovative approach, are expanding into new markets, and are continuously developing their products. The average annual growth rate is 7.2%, with a standard deviation of 15.4%, indicating that firms' growth rates vary significantly. Some companies experienced a dramatic decline in size over the observation period, while others experienced soaring growth. The average firm size is 22.30 (natural log of total assets), suggesting that the sample is largely composed of medium- to large-sized listed firms. Average ROA is 0.807, and leverage is 26.6% of total assets, indicating a moderate reliance on debt financing.

Table 2: Descriptive Statistics

Variables	Obs	Mean	Std. Dev.	Min	Max	p1	p99	Skew.	Kurt.
esgscore	480	54.739	21.037	2.328	93.674	7.82	91.521	-.187	2.062
	480	.042	.077	-.114	.591	-.1	.335	1.896	10.111
prospectorstrategy									
salesgrowth	480	.072	.154	-.513	.977	-.243	.643	1.55	9.464
firmsize	480	22.296	1.848	17.926	26.626	18.397	26.357	.351	2.696

roa	480	.807	.342	.062	2.321	.225	1.744	.793	3.728
age	480	43.56	37.791	-.5	143	-.1	140	1.193	3.155
leverage	480	.266	.212	0	.943	0	.775	.301	2.475

Correlation Analysis

The Pearson correlation between the study variables is summarized in Table 3. The findings suggest a strong negative relationship between ESG performance and prospector strategy ($r = -0.150$, $p < 0.01$) and between ESG performance and sales growth ($r = -0.195$, $p < 0.01$).

Importantly, the pairwise correlations among the independent variables show no high correlations. The highest correlation among the explanatory variables is less than 0.80, indicating that multicollinearity is unlikely to bias the regression estimates.

Table 3: Correlation Analysis

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) esgscore	1.000						
(2) prospectorstrategy	-0.150* (0.001)	1.000					
(3) salesgrowth	-0.195* (0.000)	0.223* (0.000)	1.000				
(4) firmsize	0.719* (0.000)	0.035 (0.442)	0.012 (0.793)	1.000			
(5) roa	-0.215* (0.000)	-0.130* (0.004)	-0.068 (0.139)	-0.469* (0.000)	1.000		
(6) age	0.346* (0.000)	-0.143* (0.002)	-0.127* (0.006)	0.235* (0.000)	0.016 (0.721)	1.000	
(7) leverage	0.408* (0.000)	-0.221* (0.000)	-0.145* (0.001)	0.398* (0.000)	-0.135* (0.003)	0.050 (0.274)	1.000

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

Diagnostic Tests and Model Selection

Several diagnostic tests were performed before estimating the regression models to decide the most suitable estimation procedure. Values of Variance Inflation Factor (VIF) ranged from

1.08 to 1.66, with a mean VIF of 1.27, well below the threshold of 10 (O'Brien, 2007). These results show that multicollinearity between the explanatory variables does not exist.

Table 4: Variance inflation factor

	VIF	1/VIF
firmsize	1.652	.605
roa	1.33	.752
leverage	1.305	.766
prospectorstrategy	1.147	.872
age	1.127	.887
salesgrowth	1.081	.925
Mean VIF	1.274	.

The Breusch-Pagan Lagrange Multiplier test yielded a highly significant result ($\chi^2 = 660.28$, $p < 0.001$), suggesting that panel estimation is

preferable to pooled OLS in this situation because there are significant unobserved firm-specific effects. Then the Hausman specification

test was conducted to decide between Fixed Effects and Random Effects estimation. The test yielded a significant chi-square statistic ($\chi^2 = 37.49$, $p < 0.001$), indicating that the Fixed Effects model is consistent and the Random Effects estimator is inconsistent. Therefore, the

Fixed Effects model is more useful than the Random Effects model. However, other diagnostic analyses showed that the classical regression assumptions were violated (Abdullah et al., 2022).

Table 5: Model Fitness

Model Fitness	
Breusch–Pagan Lagrange Multiplier test	$\bar{\chi}^2 = 660.28$, $p < 0.001$
Hausman specification test	$\chi^2 = 37.49$, $p < 0.001$

The Modified Wald test revealed that there was severe heteroscedasticity ($\chi^2 = 6432.94$, $p < 0.001$) (Baum, 2022), while the Wooldridge test identified first order autocorrelation ($F =$

45.93, $p < 0.001$) (Silvapulle & Evans, 1998), and Pesaran's Cross-sectional Dependence test detected cross sectional dependence ($CD = 6.19$, $p < 0.001$) (Pesaran, 2015).

Table 6: Pre-Estimates

Pre-Estimates	
Modified Wald test	$\chi^2 = 6432.94$, $p < 0.001$
Wooldridge test	$F = 45.93$, $p < 0.001$
Pesaran's Cross-sectional Dependence test	$CD = 6.19$, $p < 0.001$

The data are also heteroscedastic, serially correlated, and cross-sectionally dependent, which may lead to biased standard errors for the conventional Fixed Effects estimates. As a result, the study uses the Panel Corrected Standard Errors (PCSE) estimator with a panel-specific AR (1) correction as the main estimation method. In addition, this method provides robust standard errors and accounts for contemporaneous correlation and autocorrelation among firms, especially when analyzing corporate panel data (Kumawat & Patel, 2022).

Regression Results

The prospector strategy has a statistically significant negative coefficient of -18.181 ($p = 0.025$). The discovery suggests that companies with more aggressive prospector strategies are less likely to exhibit lower ESG performance when controlling for firm-specific characteristics. Thus, Hypothesis 1 (that there will be a positive correlation between prospector strategy and ESG performance) is rejected. The negative relationship contrasts with the theoretical expectation arising from Miles and Snow's (1978) theory, which posits that prospector firms focus on innovation, flexibility, and proactive adaptation. The results of the

present study indicate that while innovation is often linked to sustainability, there is a risk that companies highly active in market opportunities may invest not in environmental and social projects but in commercial expansion and technological experimentation. Firms investing in innovation tend to commit significant funds to research and market development, which can limit the funds available for ESG implementation.

These results also indicate that innovation does not necessarily lead to better sustainability performance. Rather, innovation needs to be purposefully aligned to ESG goals for positive sustainability results to manifest. The coefficient of sales growth is also negative and very significant ($\beta = -9.890$, $p < 0.001$). As a result, the second hypothesis, which posits a positive correlation between firm growth strategy and firm ESG performance, is rejected. The finding suggests that soaring businesses may be required to invest more in growth than ever before and dedicate more of their resources and managerial efforts to growth rather than facing greater operational complexity as a result of rapid expansion. In times of rapid growth, management may prioritize growth over sustainability, and market penetration and

capacity growth over performance. The discovery runs counter to the slack resource argument, which implies that bigger organizations have larger financial resources to commit to ESG activities. Instead, the findings are more in line with the resource allocation view, in which companies with fast growth tend to allocate resources to growth rather than to environmental or social measures.

The relationship between ESG performance and the control variables is consistently positive and highly significant, with firm size being the most significant variable ($\beta = 7.467$, $p < 0.001$). Larger companies are more visible to regulators, investors, customers, and society and are more likely to have extensive overall ESG practices in place to ensure their legitimacy and corporate reputation. This is a significant finding in support of Stakeholder Theory, which states that the larger the organization, the more it is

expected to meet the diverse expectations of its stakeholders. Likewise, the age of the firm has a positive and significant coefficient ($\beta = 0.098$, $p < 0.001$). The governance systems, organizational learning, and institutional acceptance of mature companies allow them to invest more in sustainability initiatives. Additionally, leveraging is positively correlated with ESG performance ($\beta = 5.005$, $p = 0.025$). This discovery implies that companies with higher debt financing can provide better ESG disclosures, reducing information asymmetry and increasing creditors' comfort with financial stability. By contrast, profitability (ROA) is not statistically significant in the last PCSE model, suggesting that current financial performance may not be a key determinant of corporate sustainability practices, even after accounting for several firm characteristics.

Table 7: Regression Model I

esgscore	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
prospectorstrateg	-18.181	8.09	-2.25	.025	-.34.036	-.2.325	**
y							
salesgrowth	-9.89	2.572	-3.85	0	-14.931	-4.85	***
firmsize	7.467	.644	11.59	0	6.204	8.729	***
roa	2.828	2.618	1.08	.28	-2.302	7.959	
age	.098	.021	4.57	0	.056	.14	***
leverage	5.005	2.237	2.24	.025	.62	9.389	**
2018b	0	.	.	.	.	.	
2019	.431	.231	1.86	.062	-.022	.884	*
2020	2.297	.361	6.36	0	1.589	3.004	***
2021	4.698	.345	13.60	0	4.021	5.374	***
2022	8	.433	18.49	0	7.152	8.848	***
2023	8.344	.512	16.31	0	7.342	9.347	***
2024	8.136	.514	15.83	0	7.129	9.144	***
2025	6.923	.52	13.31	0	5.904	7.943	***
Constant	-124.06	14.427	-8.60	0	-152.336	-95.784	***
Mean dependent var		54.739	SD dependent var			21.037	
R-squared		0.864	Number of obs			480	
Chi-square		1938.055	Prob > chi2			0.000	

*** $p < .01$, ** $p < .05$, * $p < .1$

Moderating Effect

The final model tests the hypothesis that the interaction between firm growth strategy and prospector strategy moderates the link between

firm growth strategy and ESG performance. The interaction is negative and statistically significant ($\beta = -52.518$, $p = 0.003$), indicating no support for Hypothesis 3. The relationship between

growth and sustainability performance becomes more negative when adopting a prospector strategy, instead of enhancing it. In reality, companies seeking to innovate aggressively and grow quickly seem less able to perform well on ESG metrics. This discovery makes an important contribution to the strategic management literature. Previous studies often assumed that innovation and growth contribute to or reinforce sustainability outcomes, as innovative firms are expected to adopt more sustainable governance and develop cleaner products. However, the current results suggest that simultaneously attempting growth and innovation could lead to strategic trade-offs.

The Resource-Based View (RBV) holds that companies have limited organizational resources. If significant investment and management efforts are directed toward

innovation and market growth, less is left over for environmental efforts, employee welfare schemes, governance development, and stakeholder engagement. As a result, ESG performance suffers. Likewise, Dynamic Capability Theory posits that organizational capabilities need to be continually developed and integrated. In companies that focus on exploration, capability overload can occur, as managers find themselves unable to manage innovation, growth, and sustainability simultaneously. Growth and innovation can compete for limited organizational resources. These results also support Miles and Snow's strategic typology, as they show that the effectiveness of the prospector strategy is contingent on the specific organizational outcome studied.

Table 8: Regression Model II

esgscore	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
prospectorstrategy	-13.743	6.932	-1.98	.047	-27.33	-.157	**
salesgrowth	-11.038	2.478	-4.45	0	-15.895	-.618	***
moderator	-52.518	17.653	-2.97	.003	-87.117	-17.918	***
firmsize	7.501	.632	11.87	0	6.263	8.739	***
roa	2.801	2.484	1.13	.259	-2.067	7.669	
age	.094	.021	4.51	0	.053	.136	***
leverage	5.452	2.197	2.48	.013	1.147	9.758	**
2018b	0	.	.	.	.	.	
2019	.363	.245	1.48	.138	-.117	.842	
2020	2.065	.371	5.56	0	1.338	2.792	***
2021	4.856	.37	13.14	0	4.132	5.58	***
2022	8.534	.526	16.22	0	7.503	9.566	***
2023	8.69	.554	15.69	0	7.605	9.776	***
2024	8.455	.555	15.24	0	7.368	9.543	***
2025	7.223	.557	12.97	0	6.132	8.314	***
Constant	-124.666	14.15	-8.81	0	-152.4	-96.932	***
Mean dependent var		54.739	SD dependent var			21.037	
R-squared		0.857	Number of obs			480	
Chi-square		2195.979	Prob > chi2			0.000	

*** $p < .01$, ** $p < .05$, * $p < .1$

Conclusion

In this study, the authors focus on the impact of prospector and firm growth strategies on Environmental, Social, and Governance (ESG) performance and on the moderating effect of the

prospector strategy on the relationship between firm growth and ESG performance. The study used a panel data regression approach and selected a balanced panel dataset of 60 firms from 2018 to 2025. Diagnostic tests showed that

heteroscedasticity, autocorrelation, and cross-sectional dependence were present, and the most suitable model for the study was the Panel Corrected Standard Errors (PCSE) estimator. The results of the empirical analysis show that a prospector strategy has a significant negative effect on ESG performance, indicating that companies fail to achieve more sustainable outcomes by pursuing aggressive innovation, market exploration, and strategic flexibility. However, they may in fact have the opposite effect. Rather, companies that are more focused on innovation can prioritize product development, technological progress, and competitive positioning over environmental, social, and governance efforts. Likewise, firm growth strategy was found to be significantly and negatively correlated with ESG performance, suggesting that investing more in expansion activities may be costing companies more in sustainability investments. The results contradict the common belief that new and sustainable growth always leads to better corporate sustainability results.

The additional moderation analysis also confirms that the prospector strategy has a significant effect, further strengthening the negative correlation between firm growth and ESG performance. An aggressive prospector orientation seems to exacerbate the negative impact of growth on ESG performance rather than helping firms convert growth into better sustainability outcomes. The study's results indicate a trade-off between rapid growth and regular product innovation, which can lead to resource shortages and managerial tensions that hamper firms' efforts to adopt effective ESG practices. The study therefore underscores the need to integrate sustainable growth strategies with other growth strategies, rather than view them as an organizational priority in their own right. The control variables also offer valuable insights. The results indicate a positive and significant relationship between firm size, firm age, leverage, and ESG performance, meaning that larger, older, and more highly leveraged firms are more likely to invest in sustainability efforts and have higher ESG performance. However, once other firm-specific factors are taken into account, profitability appears to have no significant effect on ESG performance. This

study adds to the strategic management and sustainability literature by providing empirical evidence that strategic orientation is a driver of ESG performance, but that its effect is more complex than theorized. The results suggest that innovation and growth alone are not enough to boost sustainability performance unless they are linked to a firm's ESG strategy. Thus, long-term sustainable competitive advantage should be achieved by organizations that pursue a balanced strategic approach that encourages innovation, growth, and responsible environmental, social, and governance practices. This holistic view helps companies create sustainable value while keeping up with the changing expectations of investors, regulators, and other stakeholders.

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