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CORPORATE GOVERNANCE AND SUSTAINABLE PERFORMANCE: THE MODERATING ROLE OF OWNERSHIP CONCENTRATION

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ABSTRACT

Sustainable performance has become one of the priority of organizations and governments worldwide. In the Saudi context, the Vision 2030 aims to increase the sustainability of all sectors. However, studies that are related to corporate governance and sustainable performance is still limited. This study aims to examine the effect of CG on sustainable performance. One of the characteristics of developing countries is the ownership concentration. Thus, this study also examines the moderating role of ownership concentration. Data was collected from 12 Saudi banks and analyzed using Stata. The findings showed that corporate governance affected positively the sustainable performance. In addition, ownership concentration has a negative moderating role between corporate governance and sustainable performance. The study contributed to the literature by combining agency theory, stakeholder theory, and resource-based view theory. The study also contributed to the vision 2030 by examining the association among the variables of this study.

KEYWORDS: Sustainable performance, Corporate governance, Ownership concentration, Vision 2030, Saudi Arabia.

1. INTRODUCTION

Recently, after 2015 where the global sustainability efforts has increased to achieve the goals of the united nation of sustainable world by 2030, the focus on corporate governance shifted from traditional role and goals to satisfy stakeholder to a wider goals of achieving sustainability, accountability, and ethical stewardship (Mousa & Othman, 2020). Among the organizations, banking's is critical for the economic growth and stability (Mahmood et al., 2023). The corporate governance is a critical mechanism for achieving dual goals that are related to the interest of stakeholder which includes shareholders, depositors, regulator, and broader community (Oko & Oko, 2020). Effective CG is critical for banks because these banks have high leverage, extensive responsibility, and significance for the national economies (Wuaku et al., 2025). In this context, the Saudi Arabia under vision 2030, the CG has gain increasing attention. The vision emphasize the sustainable diversification of economy, responsible financial practices, and transparency. Therefore, it is important to understand how the corporate governance mechanism can influence the sustainable performance of banks operating in Saudi Arabia.

Sustainable performance (SP) is a multidimensional variable that combine the economic, environmental, and social outcome into a comprehensive framework (Kasim, 2021). It is different from the financial performance which focuses traditionally on profitability (Shatnawi et al., 2021). SP reflects the organizational capacity to create long-term value while minimizing environmental degradation and promote social responsibility (Kashi et al., 2024). For banks, sustainability means to balance profitability with ethical lending, environmental stewardship and stakeholder inclusivity (Yilmaz et al., 2024). CG mechanism such as board of director characteristics which include the board independence, and audit committee characteristics as well as the CEO duality along with ownership structures are described the key determinants of sustainable performance (Alkaraan et al., 2025; Ray & Hardi, 2024). These mechanism can help banks in established an effective internal controls and foster the transparency as well as promote accountability (Yang et al., 2024). Therefore, they can include the banks' strategic orientation toward sustainability. Nevertheless, the extent to which CG can affect the SP is varied based on organizations and countries (Yang et al., 2024).

One of the important factor that can affect the association between CG and SP is the ownership concentration (OC) (Shatnawi et al., 2021). In which, a small portion of shareholders hold a substantial

percentage of the firms' equity. OC can play a dual role. In one hand, it can enhance monitoring effectiveness and reduce the agency conflict and cost by aligning managerial interest with those of large shareholder (Boshnak, 2024). However, it can also entrench controlling owners leading to issue of the minority shareholders and it can reduce the commitment to a broader sustainability goals (Qaderi et al., 2024). In Saudi Arabia, where the banks are often characterized by concentrated ownership of either family or state, or the institutional ownership, the OC represent a known characteristics of the corporate dynamic and governance control (Truong, 2025). Accordingly, it is important to examine the moderating role of OC and to understand how it can provide opportunities or weakness of the relationship between GC and SP.

As one of the noticed gaps in the literature is the focus on the relationship between CG and financial performance while empirical evidence of the relationship between CG and SP is still emerging in banking sector and in Gulf Cooperation Council (GCC) region (Almaqtari et al., 2024; Kashi et al., 2024). Most of the reviewed studies focused on this association among developed markets and focused merely on the environmental, social, and governance (ESG) disclosure rather than on the integrated sustainability outcomes (Al Barrak et al., 2023). In addition, there is a lack of studies that have examined the OC as a moderating variable that can interact with CG and SP (Boshnak, 2024; Qaderi et al., 2024; Truong, 2025).

This study aims to fill the gap by empirically investigating the impact of CG on SP of banks in Saudi Arabia. The study also examines the moderating role of OC. Drawing on agency theory, stakeholder theory, and resource-based view, the study proposes CG as an internal capability that aligns with decision making with sustainability imperatives. It also proposes OC as a contextual variable that have the potential to either increase or decrease this relationship. By focusing on the banks in Saudi Arabia, this research contributes to the ongoing discussion regarding organizational sustainability in developing countries and provides practical recommendation for regulators, policymakers, and investor seeking to enhance governance quality and sustainability under Vision 2030.

2. LITERATURE REVIEW

2.1 Corporate Governance and Its Role in Banks

CG is defined as a system of rules, practices, and processes through which banks are directed and

controlled, ensuring accountability and fairness in their relationships with stakeholders (Lessambo, 2014). GC in banking sector have attracted attention of practitioners and researchers due to the nature of the banking operations and the extensive use of depositor funds and the sector's systemic impact on national economies (Yang et al., 2024). Effective CG can reduce the agency problem between stakeholders including managers and shareholders by prompting transparency, effective oversight, and risk management (Yang et al., 2024). In Saudi Arabia, the effective governance can also play an essential role in attracting foreign direct investment (FDI) and enhance the public trust in the financial system by aligning the national transformation objectives under Vision 2030 (Al-Faryan & Alokla, 2023; Boshnak, 2021).

Within banks, the effectiveness of CG mechanism such as board independence, board diversity, audit committee quality, and CEO duality has been studied as determinants of financial performance and stability (Truong, 2025). However, the results of previous studies remain mixed. While some previous studies indicated that strong governance could improve organizational outcome such as financial and non-financial performance, others referred to the notion that rigid governance structure can limit the managerial innovation particularly in highly regulated sectors such as banking (Boshnak, 2024; Kashi et al., 2024; Maniruzzaman et al., 2024; Qaderi et al., 2024). This inconsistency in the findings of previous studies urge for a study that contextualize CG within institutional, cultural, and ownership structure that characterize developing financial systems, including those of the gulf region (Alkahtani, 2021).

SP extends the traditional notion of firm performance beyond the financial performance to include along with economic indicators, the environmental stewardship, social responsibility, and long-term economic viability (Yang et al., 2024). For banks, SP includes responsible lending, ethical investment, and resource efficiency along with transparent reporting practices that contribute to the well-being of society while protecting financial stability (Qaderi et al., 2024). From theoretical perspective, the association between CG and SP can be explained using the stakeholder theory which indicate that having effective governance can lead to an alignment between the interests of management not only with the shareholders but also with a broader set of stakeholders including customers, employees, regulators, and communities (Boshnak, 2021). Similarly, the agency theory suggest that effective

governance can reduce the opportunistic behavior by aligning managers' incentives with sustainable organizational goals (Saad et al., 2020). In addition, the RBV also refers to the alignment between internal capability and SP (Bätae et al., 2021). Next section discusses the theoretical foundation of this study.

2.2 Theoretical Framework and Hypotheses Development

This study deploys three theories to explain the association between CG and SP as well as the moderating role of OC. The first theory is the agency theory which was developed by Jensen and Meckling (1976). The theory suggests that CG mechanism are designed to mitigate conflicts of interest between principals (shareholders) and agents (managers). In the banking sector, where informational asymmetry and moral hazard are prevalent, governance practices such as independent boards, AC, and ownership oversight align managerial decision with shareholder interests (Arora, 2018). However, traditional agency theory focuses primarily on financial outcome overlooking broader sustainability dimensions. To extend this logic, stakeholder theory (Freeman, 1984) suggest that organization must address the needs of multiple consistencies such as customers, employees, regulators, and society to achieve long term legitimacy and resilience. CG structure that embody stakeholder inclusivity encourage transparency, ethical conduct, and sustainable value creation, thereby enhancing sustainable performance.

Complementing these perspective, the RBV suggested that governance can be conceptualized as a strategic resource that foster internal capabilities such as ethical leadership, transparency, and risk management that are valuable resources (Nuroğlu, 2016). In Saudi banks, where regulatory reforms and vision 2030 initiatives emphasize governance modernization and sustainability integration, effective governance can become a source of competitive advantage by embedding sustainability into corporate strategy. Together, these theories suggest that governance mechanisms not only curb managerial opportunism but also cultivate dynamic capabilities that promote environmental and social responsibility.

2.3 Corporate governance and Sustainable Performance

CG is widely regarded as a cornerstone for achieving both financial stability and sustainability. From an agency perspective, governance mechanisms constrain self-serving behaviour, ensuring that resources are allocated efficiently and responsibly.

From a stakeholder and RBV perspective, governance contributes to the development of organizational values, decision making quality, and transparency all of which are critical for sustainable performance. Previous studies supports this theoretical assumption. For example, the study of Post et al. (2011) and Alotaibi et al. (2024) show that effective governance in particular the board independence and diversity can enhance the sustainable performance in the form of environmental performance and social performance. Similarly, the study of Mollah et al. (2017) found that in Islamic and commercial banks, the governance quality is a key determinant of ethical and risk-adjusted performance. In the Saudi banking context, the central bank of Saudi Arabia (SAMA) and capital market authority (CMA) have strengthened governance requirements to enhance accountability and align banks with sustainable development goals. Consequently, it is proposed in this study that the effective CG will have a positive impact on sustainable performance.

H1: CG has a positive impact on SP of banks in Saudi Arabia.

2.4 Ownership Concentration as a Moderating Variable

OC is a structural dimension that fundamentally shapes the effectiveness of governance mechanisms (Shatnawi et al., 2021). Based on agency theory, the OC can play a dual rule (Waheed & Malik, 2019). It can reduce the agency cost by enhancing monitoring, motivate and empower managers. However, when OC becomes excessively concentrated, dominant shareholders may prioritize private benefits and weaken governance accountability (Alsmady, 2018). Within stakeholder and legitimacy framework, OC can also influence how firms balance shareholder wealth with broader social and environmental goals. In Saudi Arabia, the structure of ownership of banks is characterized by the presence of state entities, family concentration, and institutional investors. This structure can be argued as a stabilizing mechanism, but they can overcome the minorities right and limit transparency. Practical studies in the Middle East region and GCC indicated that the OC can weaken the relationship between governance and sustainability due to reduced regulatory and limited external pressure for ESG disclosure (Al-Janadi et al., 2013; Pillai et al., 2021). However, in situation where large shareholders are institutional or governmental, OC can reinforce sustainability governance and legitimacy of organizations. Accordingly, this study proposes that OC a

moderating variable between CG and SP of banks in Saudi Arabia.

H2: OC moderates negatively the effect of CG on SP of banks in Saudi Arabia.

3. RESEARCH METHODOLOGY

This study is conducted to examine the effect of CG on SP and the moderating role of OC. The study uses a quantitative approach. A panel data framework that is consist of cross-sectional (bank-level) and time series (year-wise) is employed to control for unobserved heterogeneity and enhance estimation efficiency. The population of this study is banks operating in Saudi Arabia. The study examines the banks during 2014-2024. All banks listed in the Saudi Exchange known as Tadawul is included as the population of this study. However, the sample is purposive and limited to banks that have annual reports between 2014-2024 as well as have reports on SP and CG. These banks include 14 banks that are listed on Tadawul and have annual reports between 2014-2024 resulting in 154 bank-year observations. Databases such as Refinitiv Eikon, Bloomberg, and Tadawul were used to collect the data of SP. the data related to the CG and OC were collected from annual reports.

3.1 Measurement of the Variables

The dependent variable of this study is the SP. It is operationalized to include environmental, social, and economic dimensions. This operationalization is consistent with previous studies (Alotaibi et al., 2024; Aras et al., 2018). The score was normalized between 0-1 to create a unified index representing a bank's commitment to sustainable practices. The independent variable is the CG and it is measured using a governance index constructed from six sub-variables that are related to board size, board independence, AC independence, CEO duality, board gender diversity, and board meeting frequency (Adams & Mehran, 2012; Al-Malkawi & Javaid, 2018). Each variable was coded and standardized and normalized to create an index to measure the CG index. The moderating variable is OC and it is defined as percentage of shares held by the largest shareholder and alternatively as the aggregate ownership of top five shareholder. The study includes four control variables. These are in line with prior literature such as (Claessens & Yafeh, 2013; Mollah & Zaman, 2015). The control variable include bank size, leverage ratio, profitability, and capital adequacy ratio. Table 1 shows the measurement of the variable

Table 1: Measurement of the Variables

Variable	Definitions	Measurement
Dependent variable: SP	Composite indicator reflecting environmental social and economic dimensions.	Economic score (0-1), environmental score (0-1), and social score (0-1)
Independent variable: CG	Board size, board independence, AC independence, CEO duality, board gender diversity, and board meeting frequency.	Governance index using six mechanisms.
Moderating Variable: OC	Percentage of shares held by the largest shareholder.	Aggregate ownership of the top five shareholders.
Control variables		
Bank size	Natural logarithm of total assets	
Leverage ratio	Total liabilities to total assets.	
Profitability (ROA)	Net income to total assets.	
Capital adequacy ratio (CAR)	Regulatory capital to risk-weighted assets.	

3.2 Model Specification

The econometric specification examines both the direct and moderating effects. The baseline specification is expressed as:

$$SP_{it} = B_0 + B_1 CG_{it} + B_2 OC_{it} + B_3 (CG_{it} * OC_{it}) + B_k \text{ control variables}_{it} + u_i + \lambda_t + \epsilon_{it}$$

SP_{it} refers to sustainable performance of banks i in year t

CG_{it} represents the CG index.

OC_{it} refers to ownership concentrations

CG_{it} * OC_{it} capture the interaction term that test the moderating effect of OC on the relationship between CG and SP.

Control variables include the vector of control variables for bank i in year t,

u_i represent unobserved, time-invariant bank-specific effects

λ_t captures year-specific effects common to all banks

ε_{it} is the idiosyncratic error term.

4. DATA ANALYSIS

4.1 Descriptive Statistics

Table 2 presents the descriptive statistics for all study variables across the 2014–2024 period. The results show moderate variability among CG and OC indicators, suggesting sufficient dispersion for econometric analysis.

Table 2. Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max
Sustainable Performance (SP)	0.642	0.157	0.300	0.910
Corporate Governance Index (CG)	0.558	0.122	0.280	0.850
Ownership Concentration (OC)	41.75	18.60	10.20	82.30
Bank Size (LnAssets)	16.35	1.12	14.15	18.60
Leverage Ratio (LEV)	0.85	0.07	0.63	0.93
ROA	0.021	0.009	-0.005	0.044
CAR	15.72	2.35	11.80	20.40

The average SP score of 0.64 reflects the growing integration of sustainability practices in Saudi banks, aligning with Vision 2030. The mean OC of 41.75 % indicates that Saudi banks exhibit moderately high control by dominant shareholders, consistent with findings from Al-Hussain and Johnson (2021).

4.2 Correlation Analysis

Table 2 reports the Pearson correlation matrix. Corporate governance exhibits a positive correlation with sustainable performance (r = 0.48, p < 0.01), suggesting that stronger governance is associated with higher sustainability outcomes. Ownership concentration is negatively correlated with sustainable performance (r = -0.24, p < 0.05), implying that concentrated control might reduce the breadth of sustainability engagement.

Table 2. Correlation Matrix

Variables	SP	CG	OC	SIZE	LEV	ROA	CAR
SP	1						
CG	0.48***	1					
OC	-0.24**	-0.15	1				
SIZE	0.19*	0.21*	-0.08	1			
LEV	-0.11	0.09	0.12	0.15	1		
ROA	0.37***	0.29**	-0.10	0.33**	-0.07	1	
CAR	0.27**	0.23*	-0.05	0.14	-0.09	0.26*	1

Notes: *** p < 0.01, ** p < 0.05, * p < 0.10.

The absence of strong correlations (|r| < 0.80) indicates that multicollinearity is unlikely to bias the regression results.

4.3 Diagnostic Tests

The study conducted a range of pre-estimation diagnostic tests to examine the applicability and statistical validity of the panel regression model. The Breusch–Pagan Lagrange Multiplier test indicated high panel effects (χ² = 52.17, p < 0.01), demonstrating that a pooled OLS approach would be unsuitable. Subsequently, the Hausman specification test favoured the fixed-effects estimate over the random-

effects ($\chi^2 = 14.86$, $p < 0.01$), suggesting that unobserved heterogeneity among banks is related with the explanatory variables and must be corrected for accordingly. The Wooldridge test for autocorrelation could not demonstrate serial correlation in the error structure ($F = 1.77$, $p = 0.21$), demonstrating the independence of residuals over time. However, the Modified Wald test confirmed the presence of heteroskedasticity ($\chi^2 = 34.22$, $p < 0.05$), necessitating the adoption of heteroskedasticity-robust standard errors. To tackle this difficulty, robust standard errors clustered at the

bank level were utilized to provide consistent and efficient coefficient predictions. Additionally, multicollinearity diagnostics revealed no statistical issue, since all Variance Inflation Factors were below the allowed level ($VIF < 4.0$). Collectively, these diagnostic tests establish the suitability and robustness of the chosen fixed-effects model for the next empirical inquiry.

4.4 Regression Results

Table 3 summarizes the results of the two-way fixed-effects estimations.

Table 3. Panel Fixed-Effects Regression Results (Dependent Variable: SP)

Variables	Model 1	Model 2	Model 3
Corporate Governance (CG)	0.326*** (4.82)	0.298*** (4.40)	0.271*** (3.96)
Ownership Concentration (OC)		-0.142** (-2.28)	-0.117* (-1.89)
CG × OC			-0.084** (-2.15)
Bank Size	0.062** (2.11)	0.058** (2.06)	0.053* (1.87)
Leverage Ratio	-0.118 (-1.34)	-0.102 (-1.28)	-0.098 (-1.22)
ROA	0.223*** (3.40)	0.205*** (3.22)	0.197*** (3.09)
CAR	0.073** (2.21)	0.066* (1.97)	0.064* (1.93)
Constant	0.191 (1.22)	0.205 (1.30)	0.215 (1.34)
Bank FE / Year FE	Yes	Yes	Yes
R ² (Within)	0.482	0.511	0.547
F-Statistic	14.73***	15.11***	16.04***

Notes: *t*-statistics in parentheses; *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Model 1 includes only the CG index and control variables. Model 2 adds ownership concentration, and Model 3 incorporates the interaction term to test moderation. A significant positive association ($\beta = 0.271$, $p < 0.01$) exists between CG and SP, supporting H1. This supports Al-Malkawi and Javaid (2018) and Post et al. (2011) that transparent and accountable governance systems promote sustainable integration. Ownership concentration negatively affects sustainable performance ($\beta = -0.117$, $p < 0.10$). Saudi banks' concentrated ownership may make dominant shareholders seek short-term benefits above sustainability. The interaction term CG × OC ($\beta = -0.084$, $p < 0.05$) indicates that OC moderates the relationship between CG and SP. Ownership reduces governance sustainability. Governance improvements may not help centralized banks due to shareholder voice or board independence. Analysis in STATA confirms the moderating effect, indicating that the CG–SP connection steepens at lower ownership concentrations and flattens as ownership concentration increases.

To ensure reliability, these additional computations validated empirical data stability across model parameters. The Random-Effects and Feasible Generalised Least Squares (FGLS) estimators gave coefficient signs and significance levels identical to the fixed-effects model, showing that estimation did

not alter correlations. Re-estimating the baseline model using environmental disclosure and CSR expenditure proxies confirmed the dependent variable. Consistent findings across replacements showed sustainability did not alter critical links. CG and OC delays avoided reverse causality. Endogeneity is unlikely to affect this findings. Both heteroskedasticity-robust and cluster-corrected standard errors supported the coefficients' statistical reliability. The robustness checks confirm the study's empirical results that OC moderates across models. Concentrated ownership may reduce SP, while good governance enhances it. Agency theory suggests that CG decreases CEO opportunism and promotes responsible decision-making, boosting sustainability. Affluent shareholders might avoid governance and sustainability through entrenchment. According to stakeholder theory, concentrated ownership reduces management accountability to controlling investors, whereas diverse ownership facilitates stakeholder response. Governance provides ethics and transparency, but controlling shareholders may limit its value. Results greatly affect Saudi Arabia. Banks must balance ownership as they execute Vision 2030 and SAMA's governance adjustments. Concentration weakens board transparency and independence, affecting sustainability. Regulators and policymakers

may encourage institutional participation and openness for sustainable banking.

5. Implications

CG and sustainability literature benefits from this study. Governance reduces “environmental and social agency costs,” ensuring managers seek long-term stakeholder value above financials, expanding agency theory. Stakeholder theory increases corporate governance's complex role in societal license to operate. Further, OC moderates governance, supporting a contingency-based model and indicating that ownership configurations affect governance efficacy. Panel econometric approaches in emerging-market banking provide trustworthy results from Saudi Arabia, a sustainability-governance underrepresented location, filling a geographical and methodological gap.

The results of this study can benefit bank managers, investors, and regulators. The findings highlight bank management and board governance beyond regulatory compliance. Governance for sustainability includes independent boards, active audit committees, and disclosure. Banks can gain stakeholder confidence and value via sustainable and environmental finance expertise and board diversity. The research implies shareholders and investors, especially institutional and governmental owners, should prioritise long-term value over short-term profits. Active and responsible concentrated shareholding improves ethical banking and sustainable finance. The findings strongly advise regulators and lawmakers strengthen governance and sustainability reporting for Saudi Vision 2030. CMA and SAMA should support ESG reporting, diverse ownership, and board sustainability committees. These solutions would boost transparency and government. It recommends legal changes to make Saudi finance sustainable and accountable. Diversity in ownership, board independence, and sustainability reporting improves governance and sustainability. Institutional investor

participation and international alliances may mitigate the negative effects of concentrated ownership, improving banking-friendly governance.

6. CONCLUSION

The findings of this study based on panel data between 2014-2024. The findings suggested that effective CG can enhance SP. Concentration of ownership moderated the relationships between CG and SP. Diverse boards, strong audit committees, and management separation help banks address environmental and social issues. Concentration of ownership hindered SP, demonstrating dominant shareholders may diminish managerial incentives to pursue sustainability goals. More importantly, moderation reveals that high ownership concentration diminishes CG's sustainability advantages. If family groupings, government agencies, or institutional investors control a corporation, governance norms cannot encourage transparency, ethics, and social responsibility. This study combines Agency Theory, Stakeholder Theory, and Resource-Based View to enhance theory. Sustainability initiatives decrease agency conflicts and align business decisions with stakeholders. Sustainable governance requires institutional framework and ownership structure, as ownership concentration mitigates it. Despite the significance of the findings of this study, it is limited to the banks in Saudi Arabia and it is cross-sectional study. Research may expand to compare GCC or Middle Eastern institutions. This study used secondary data which may ignore leadership and governance ethics. Multimethod research involving interviews or content analysis is recommended. Third, although fixed-effects and robustness tests address endogeneity, future research may leverage dynamic models (e.g., system-GMM) or instrumental-variable approaches to improve causal inference. Finally, state, family, and institutional ownership concentrations may affect CG-SP in future research.

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