"Predicting capital structure decisions through firm performance, firm size, and corporate governance"

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# PREDICTING CAPITAL STRUCTURE DECISIONS THROUGH FIRM PERFORMANCE, FIRM SIZE, AND CORPORATE GOVERNANCE

#### Abstract

Corporate structure decisions are the foundation of a company's legal, financial, and operational framework, influencing diverse issues, from liability and tax obligations to growth potential and public perception. The paper aims to analyze the effect of firms' financial performance on capital structure decisions. Firm size and corporate governance were taken as moderators and mediators, respectively. The study is based on 23 non-banking public firms listed on the Nepal Stock Exchange, adapting a causal-comparative research design. The moderated mediation model was tested using the Process Macro to assess the impact of corporate governance scores on the relationship between firm performance and capital structure. The result shows that firm performance positively and significantly impacts capital structure decisions. The results revealed no effect of corporate governance on capital structure decisions; however, the moderated mediation impacts of corporate governance and firm size have been reflected in the financing decision. This study extends previous research with the moderated mediation effects of corporate governance and the size of non-banking firms on their financing decisions. The results encourage managers to raise debt funds for those firms that observe the firm's size, providing practical insights into business decisions. The study also has policy and theoretical implications.

#### Keywords

capital structure decision, corporate governance, debt ratio, firm performance, firm size, return on equity

JEL Classification G17, G30, G34, G33

### INTRODUCTION

The debate surrounding capital structure is a contentious issue in both the theoretical realm and the practical application of corporate finance (Clayman et al., 2012). Capital structure is pivotal in business management and finance in terms of firm performance and corporate governance (CG). Understanding the intricate relationships among these factors has substantial implications for business managers, policymakers, investors, and market regulators. The interaction between firm performance and capital structure has been a concern of widespread intellectual inquiry, with researchers seeking to unknot the complex dynamics that influence corporate decision-making and financial results.

Firm performance, often measured by profitability, growth, and shareholder value, highlights a company's operational and strategic efficiency. Balancing debt and equity in capital structure is essential for minimizing costs, maximizing returns, and maintaining flexibility. Performance and corporate governance (CG) practices influence this balance, establishing rules and frameworks to protect stakeholder interests and ensure responsible management.

CG implies a framework of rules and motivations that govern a firm's business (Claessens & Yurtoglu, 2013). It varies across economies and

influences the relationship between performance and capital structure. Firm governance can mitigate risks, enhance decision-making, and improve financial outcomes. The role of governance as a mediator in this nexus provides valuable implications for optimizing strategies and enhancing firm value. Similarly, firm size, with its impact on financial access and leverage, plays a moderating role, adding complexity to these relationships.

Decisions regarding capital structure influence a firm's cost of capital, risk profile, and financial flexibility, impacting its ability to pursue growth opportunities and withstand economic uncertainties. The choice between debt and equity financing reflects management's assessment of the trade-offs between financial leverage benefits and associated risks. Given the capital market's nascent stage, identifying the optimal structure of equity and debt sources for financing poses a significant challenge.

This study analyzes how financial performance influences capital structure decisions in mediating the relationship of CG and firm size as a moderator. It addresses key questions as a. Does financial performance significantly affect capital structure decisions? b. Is it possible to have significant mediating effects of CG on the relationship between capital structure decisions and firm performance? The findings and conclusions of the study provide a comprehensive framework to facilitate insights into the strategic value of CG practices in shaping financial outcomes and guiding firms toward sustainable growth; it also bridges gaps in the current literature and provides a comprehensive framework for evaluating the interconnectedness of these vital corporate elements.

#### **1. LITERATURE REVIEW**

Various theories have been formulated to evaluate CG and capital structure decisions, including the pecking order theory (Myers & Majluf, 1984), agency cost theory (Jensen & Meckling, 1976), and trade-off theory (Kraus & Litzenberger, 1973). Corporate governance encompasses a framework comprising processes, traditions, policies, and legal guidelines aimed at creating an atmosphere that is transparent, trustworthy, and accountable (Aguilera & Jackson, 2010; Jamali et al., 2008). It holds that the agency issue arises from the divide between agents (managers) and principals (shareholders) and between agents (shareholders) and principals (creditors) (Carney et al., 2011; Young et al., 2008). Effective governance is a vital mechanism for mitigating conflicts among these parties and can significantly influence the determination of leverage levels. According to Chang et al. (2014), a firm's capital structure is influenced by its unique characteristics and conflicts of interest between different stakeholder groups. At the core of corporate governance lies agency theory, which speculates that there exists a contractual relationship between the principal (granting authority) and the agent (receiving authority), emphasizing cooperation. Jensen and Meckling (1976) conveyed that the agency theory dictates that companies strike a balance between costs and benefits, operating in the best interests of their stakeholders to improve performance through optimizing leverage levels.

The trade-off theory suggests that substantially profitable companies utilize additional debt (Abel, 2017; Ghazouani, 2013; Serrasqueiro & Caetano, 2015). This inclination stems from profitable firms using their past or present earnings to distribute dividends to shareholders, thereby sending a positive signal to the capital market. Consequently, these firms may employ more debt for future financing needs (Adair et al., 2015). In contrast, the pecking order theory presents a contrasting view, indicating an adverse correlation between profitability and leverage (Cotei & Farhat, 2009). Specifically, it proposes a hierarchical sequence for the firm's financing, wherein internal profits are utilized first, chased by debt, with equity as a fallback for potential investments.

The study of firm performance and capital structure is mainly based on the pecking order, trade-off, and agency theory (Ayaz et al., 2021; Martinez et al., 2019). According to these theories, in the presence of asymmetric information, the firm employs internal equity, and if it is exhausted, it uses debt over equity. Myers (1989) argued a negative association between profitability and capital structure. However, the tradeoff theory advocates a positive association between the two (Myers,1989; Rajan & Zingales, 1995; Rashid and Jabeen, 2018). Among others, the most judging evidence against the tradeoff theory is the strong negative association of firm performance with capital structure. Likewise, some scholars (e.g., Gill et al., 2011; Singh & Bagga, 2019) have consistently presented a positive link between firm performance and leverage.

A company can achieve greater shareholder returns by leveraging its assets to minimize waste and enhance profitability. Gompers et al. (2003), utilizing governance scores, have shown a positive correlation between performance and governance quality, indicating that companies with strong governance practices experience better stock performance. However, improved performance can also lead to increased CEO power, ethical standards, and organizational slack, which may inadvertently result in disagreeable governance outcomes like entrenchment and unprincipled actions (Al-Gamrh et al., 2020; Cheung et al., 2011). According to Finkelstein and D'aveni (1994), periods of strong performance reinforce governance structures, making it less likely for firms to replace their CEOs even after the performance period, potentially leading to CEO entrenchment. Baysinger and Hoskisson (1990) assessed the link between firm performance and CG component - the number of Board Members and found no association between the two. In their findings, the board was independent of the management control; thus, performance remains elusive. However, firm performance is essential to increase directors' remuneration and create a strong bond of directors (e.g., independent directors) to address the issues related to several stakeholders (Brennan, 2006). In particular, firm performance is directly linked to the shareholder's wealth (Baysinger & Butler, 1985).

Literature suggests mixed findings regarding the impact of corporate governance and capital structure decisions. Haque et al. (2011) argued following agency theory, proposing that robust CG at the firm level enhances investor confidence and diminishes agency costs, thereby facilitating an improved approach to equity financing and reducing dependence on debt financing; however, Arora and Sharma (2016) reported no association between corporate governance indicators and return on equity and profitability of the firm. Conversely, manipulating shareholders of weakly governed firms are more inclined to favor debt financing to shield themselves from dilution of control. Similarly, Javaid et al. (2023) found that governance elements such as CEO/chair duality, size of the board of directors, institutional ownership, composition of the board, and managerial ownership positively impact financing decisions. However, managerial and institutional ownership negatively influence capital structure decisions. Jensen (1986) suggested that firms with more significant governance scores have more immense financial leverage.

Effective CG practices can mitigate agency conflicts, enhance transparency, and improve performance and capital structure optimization (Arora & Sharma, 2016). However, the specific dynamics of this mediation are influenced by contextual factors unique to underdeveloped economies, necessitating tailored governance practices to achieve desired financial outcomes. The effectiveness of corporate governance as a mediating factor varies across different underdeveloped economies due to political instability, legal frameworks, and cultural norms. Studies highlight the importance of adapting governance practices to local contexts to improve firm performance and capital structure decisions (Chirinko & Singha, 2000).

Larger corporations boast a multitude of stakeholders, thereby enhancing their governance structures for greater transparency and reliability (Lashitew, 2021). A study by Black et al. (2006) highlights that more prominent and risk-prone corporations exhibit superior governance practices, often relying on equity financing for longterm management. Such findings align with the concept of "sticky governance," wherein companies gradually modify their governance structures to cope with the economic stimuli. On the other hand, the larger the firms, the more significant the board attributes, and the higher the compensation (Lokman & Tareh, 2020; Omebere & Frank, 2022). Higher compensation increases an organization's cost, influencing the firm to use less debt. Similarly, another school of thought, as stated by Sheikh and Wang (2012), shows that governance score has an optimistic linkage between firm performance and capital structure decisions.

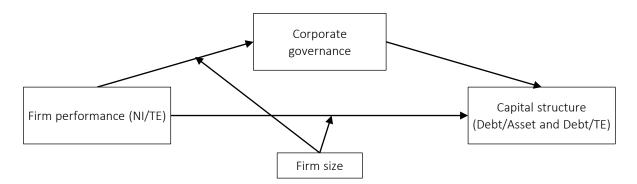


Figure 1. Study framework

The study developed a framework based on the discussion, as shown in Figure 1, to examine the effect of performance (NI/TE) on capital structure (Debt/Asset and Debt/TE) in association with corporate governance and firm size.

#### 1.1. Hypotheses of the study

Based on the framework, the following hypotheses were developed:

- *H1: Firm performance has a negative connection with capital structure decisions.*
- *H2: Firm performance positively impacts a firm's corporate governance.*
- H3: Corporate governance practices have a negative effect on a firm's capital structure decisions.
- H4: Corporate governance mediates the relationship between firm performance and capital structure decisions.
- *H5: Firm performance and size interaction effect significantly affect corporate governance.*
- H6: The relationship between firm performance and capital structure becomes stronger with the increase in a firm's size.

#### 2. METHOD

In Nepal, public companies must adhere to specific corporate governance regulations, including maintaining minimum board meetings, provisions regarding the board of directors (inclusiveness for diversity and fairness), and establishing a three-member auditing and risk management committee. In Nepal, stringent legal frameworks dictate the operations of such entities. Particularly, publicly listed companies are bound by mandatory provisions, including the obligation to convene board meetings at least six times a year, maintain a board comprising at least five members, including one independent director, uphold a three-member audit committee responsible for overseeing accounting systems, and appoint CEOs through open market competition. Researchers have examined the direct impact of corporate governance on firms' financial performance. However, there remains a gap in the corporate finance literature regarding its influence on the interplay between capital structure decisions and firm performance.

As of mid-July 2022, the Nepal Stock Exchange (NEPSE), the only stock exchange in Nepal, listed 115 non-banking firms, comprising six hotels, 91 hydropower, nine manufacturing and processing, two trading, and seven other types. All 115 firms constitute the population under the study. Financial firms were excluded since they primarily accept public deposits and provide loans to other sectors, while non-financial firms receive loans. Data were gathered from the respective firms' annual reports and the NEPSE database. Researchers visited listed non-financial firms to ensure a sufficient sample size confirming the availability of their financial reports for publication.

Various factors, such as recent establishment or procedural delays, led some companies not to convene their general meetings or prepare annual reports for public availability. Additionally, data filtering techniques were employed to eliminate firms with incomplete data. Following these procedures, a sample of 23 firms from 2016 to 2022 was chosen for this study. Due to the devastating earthquake in Nepal in 2015 and the undeclared border blockade from India shortly afterward, many businesses were forced to close, and the share market was also affected. Consequently, data for the year 2015 were unavailable, resulting in the inclusion of only after the year 2016 in the sample.

The study employed a causal-comparative research design using the Hayes Process macro (Hayes, 2022) to test the moderated mediation model. Return on equity (ROE) was used as a predicting variable, and capital structure, total debt to total asset, and total debt to total equity were used as dependent variables. A composite corporate governance score has been used to examine the mediating impact on the association between firm performance and capital structure. Besides, there is a considerable variation in the decision to leverage, and firm size is used as a moderating variable to capture the unbiased analysis of financing decisions. In this study, ROE is the performance variable, aligning with its inclusion in most corporate governance studies (Bhagat & Bolton, 2008). This is because publicly owned firms typically have more connected shareholders and are inclined to assess performance using this ratio. CG index was constructed by averaging different CG components such as board size, audit commit, number of board meetings, and number of independent directors as per Ali et al. (2015) and Arora and Bodhanwala (2018). The mediating moderating model used in this study was tested using the bootstrapping method as recommended by Hayes and Scharkow (2013). Bias-corrected confidence intervals at the 95% level were constructed using 10,000 bootstrap samples from the original dataset. The assessment of direct and indirect effects was conducted using Hayes's SPSS multiple-mediator PROCESS Macro Model 8 with mean center continuous variables and robust standard errors (Hayes & Scharkow, 2013). The hypothesis regarding the indirect effect is deemed invalid if the confidence interval from the lower to upper bounds encompasses zero at a 95% confidence level.

# 3. RESULTS

Descriptive findings, i.e., mean and standard deviation, correlations, and multicollinearity test (VIF) among variables scales employed in this study, are provided in Table 1. 161 firm-year observations show that Nepalese firms used 38 percent of total assets as debt (mean DR). While it is seen from the equity portion, it is shown that 156 percent debt (mean DE). During the study period, the average ROE was 3.215%. The ROE was adversely and significantly associated with the debt-asset and debtequity ratio. The average cumulative value of independent directors, the board size, and the number of members of the audit committee measured the index for corporate governance. Likewise, a firm's size was estimated by the log value of the firm's annual sales.

Besides, the CG score is negatively correlated with the debt-asset and debt-equity ratio, but both are insignificant. Thus, the study claims that no significant association of the corporate governance index with these ratios exists. Firm size is positively and significantly correlated with leverage ratios, indicating that the larger the firm's size, the higher the level of governance. Likewise, Table 1 provides evidence of multicollinearity. The low correlation between the variables and the variance inflation factor of less than 3 implies no multicollinearity issue.

	Mean	SD	1	2	3	4	5	VIF
DR	0.384	0.296	1					1.201
DE	1.560	2.848	.589**	1				1.106
ROE	3.215	1.602	263**	167*	1			1.032
CG	3.696	0.571	-0.099	-0.031	0.051	1		1.034
FS	7.976	1.104	.191*	.255**	-0.016	.160*	1	1.104

 Table 1. Mean, standard deviation, and correlations

*Note*: \*\* and \* – Correlation is significant at the 0.01 level and 0.05 level (2-tailed), respectively. DR – debt ratio, DE – debt-equity ratio, ROE – return on equity, CG- corporate governance index, and FS – firm size.

The bootstrap process macro was used as suggested by Hays and Schoenberger (2014) for hypotheses examination. This approach has gained significant popularity for testing the model through the mediation effect, as it is more effective than other methods, as illustrated by Abu-Bader and Jones (2021). Researchers worried about Type I errors should choose either the Monte Carlo confidence interval or the distribution-of-the-product method, as they rarely produce differing results (Hayes & Scharkow, 2013). The centile bootstrap confidence interval serves as a commendable middleground test. However, this assumption becomes highly dubious, particularly in cases where the sample size is insufficiently greater (Preacher & Hayes, 2008). Moreover, it has been demonstrated that the bootstrapping method outperforms the coefficients and causal steps methods in terms of statistical power and Type I error rates (Al-Sa'di et al., 2017).

Hypothesis 1 proposed an adverse influence of firm performance on capital structure decisions. However, Table 2 provides positive and significant (non-zero bootstrap interval) coefficient values of the effects of ROE on DR and DE. The beta coefficients of the effect of ROE on DR (.0296, .0142 – .0449) are against the priori hypothesis, as the effect of ROE on DE (.0644, .0271 – .1551) supports refuting *H1*, implying that organizations with more significant earnings incline to use more debt.

Likewise, the hypothesis (H2) is subject to refutation, revealing a significant adverse effect of the company's performance on corporate governance (-.0453, -.0757 — -.0149). Further, the corporate governance index positively correlates with firm size (Table 1). However, it has an insignificant influence on a firms' size on corporate governance (.0640, -.0152 - .1431). However, the interaction effect of ROE and firm size is found to have a significant constructive impact in predicting corporate governance (.0065, .0022 - .0108), indicating that the increasing firm size with increasing ROE increases the CG index, meaning that the large firms with higher ROE tend to be more proactive for corporate governance, supporting H5a. Similarly, the hypothesis (H3) is also refuted because of insignificant intervals (CG -> DR: - 0.1050 - 0.0501; CG -> DE: - 0.5030 - 0.4211).

Table 2 provides evidence of corporate governance's mediating effect in predicting the return on equity on the debt ratio. The increasing CG index of the organization influences the ROE-DR relationship. Likewise, the increase in the CG index mediates the ROE-DE ratio relationship. As in the ROE-DR relationship, with an increasing CG index, companies with high ROE tend to increase the DE ratio. This means that the increased ROE tends to influence leverage, i.e., capital structure with an increasing CG index, which supported H4. This result is like the findings of Frank and Goyal (2009), as CG has no mediating effect between ROE and capital structure, i.e., capital structure has a significant adverse relationship with Tobin's Q as measured in terms of the Market-to-book ratio. This study explored another issue in the corporate governance literature and capital structure.

The interaction effects of firm size and ROE predicting DR and DE ratio were significant (BootLLCI .872 – BootULCI 1.352, in Table 2). The role of ROE was insignificant in predicting the DR and DE ratio, which later became significant with the interaction effect of firm size. The study revealed the increasing effect of ROE with the increased firm size. The significant index of moderated mediation (non-zero Boot interval) with an index (0.00011 for ROE-DR and 0.00067 for ROE-DE ratio) supported accepting hypotheses 5 and 6. This indicates that the connection between firm performance (ROE) and capital structure will be more assertive with a larger firm size and a robust corporate governance index.

#### 4. DISCUSSION

The study revealed the significant positive effect of return on equity on DR and DE, implying that firms with more significant profits use more debt, supporting the findings of Gill et al. (2011) and Singh and Bagga (2019). However, this result contradicts the findings of Mayers (1989) and Rashid and Jabeen (2018); the positive impact might be because of a firm's willingness to pay dividends from their profit, causing immediate capital needs to be fulfilled by investment opportunities using debt capital. With this, the study results support the tradeoff and agency theories. In addition, this result also implies that firms with sufficient profit use additional debt as these firms may enjoy an easy approach to the cap-

		Predicting re	lationship				
Model         R <sup>2</sup> Path Coefficient         SE         P-value         95% confidence							
Model	n	Path Coemcient	SE	P-value	95% confidence interva Lower Upper		
ROE – CG	0.0805	-0.0453	0.0154	0.0037	-0.0757	-0.0149	
FS – CG	0.0003	0.0640	0.0401	0.1124	-0.0152	0.1431	
ROE*FS – CG		0.0065	0.0022	0.0032	0.0022	0.0108	
:	Conditional eff	ects of the focal predi	ctor at values	of the modera	tor(s)		
FS	Effect	se	p			ULCI	
6.8720	0006	.0011	.6044	00		.0016	
7.9755	.0066	.0022	.0036	.00		.0110	
9.0791	.0138	.0045	.0026	.00	49	.0227	
		Total effec	t on DR				
Model	R <sup>2</sup>	Path Coefficient	SE	P-value		ed bootstra ence interva	
					Lower	Upper	
ROE – DR	0.1757	0.0296	0.0078	0.0002	0.0142	0.0449	
CG – DR		-0.0275	0.0393	0.4854	-0.1050	0.0501	
FS – DR		0.0660	0.0199	0.0011	0.0268	0.1053	
ROE*FS – DR		-0.0044	0.0011	0.0001	-0.0066	-0.0022	
		Conditional In ROE → CG					
MOD	Effect	Boot	SE	BootLLCI	В	ootULCI	
-1.523	1.212	.23	1	- 1.124		1.102	
0.000	2.326	.322	2	0.242	2.217		
1.523	3.143	.408	3	1.973		3.027	
		Index of modera	ted mediation				
	Index	Boot	SE	BootLLCI	В	ootULCI	
MOD	.00011	.062	2	.987		1.535	
,		Total effec	t on DE	<u>.</u>			
Model	R <sup>2</sup>	Path Coefficient	oefficient SE		Bias corrected bootstra 95% confidence interva		
	Model R <sup>2</sup> Path Coefficient SE P-value		Lower	Upper			
ROE – DE	0.6849	0.0644	0.0463	0.1665	0.0271	0.1551	
CG – DE		-0.0410	0.2339	0.8612	-0.5030	0.4211	
FS – DE		0.6979	0.1184	0.0001	0.4639	0.9318	
ROE*FS – DE		-0.0163	0.0066	0.0138	-0.0293	-0.0034	
		Conditional In ROE → CG →					
MOD	Effect	Boot		BootLLCI	B	BootULCI	
-1.624	2.102	.13	1	- 2.014		3.0027	
0.000	2.306	.22	1	0.641		1.027	
1.624	3.012	.31	1	2.723	4.0027		
		Index of modera	ted mediation				
	Index	Boot	SE	BootLLCI		BootULCI	
			.053			1.352	

 Table 2. Regression result for mediation analyses

Notes: Based on 10,000 bootstrap samples.

ital market, and lenders will trust them easily. The decision-makers seemed to use debt financing to improve financial performance. However, the utilization of debt capital is directly affected by firm performance alongside corporate governance practices (Detthamrong et al., 2017).

Corporate governance consists of a framework of rules and incentives to manage a company's leadership (Claessens & Yurtoglu, 2013). These rules vary significantly between developed and developing economies and involve efforts by stakeholders to guarantee that managers and insiders portray the best interests of stakeholders. This study's findings indicate that higher Return on Equity (ROE) may undermine a firm's corporate governance practices. This could be because improved performance might lead to stronger managerial entrenchment, reducing board independence. Consequently, managers, including the CEO, may bear more responsibility for developing and implementing policies aligned with organizational goals. This suggests a new area for research: whether corporate governance practices are driven by compliance, as increased ROE might reduce transparency and disclosure, as proposed by Al-hadal et al. (2019). Additionally, while the corporate governance index is absolutely associated with

firm size, it has little impact on corporate governance, contradicting Bui and Krajcsák's (2024) findings. Nevertheless, the interaction between ROE and firm size significantly affects the prediction of corporate governance. This implies that larger firms with higher ROE are generally more proactive in their corporate governance practices.

Similarly, the findings suggest that the corporate governance index does not impact firms' decisions for capital structure, which aligns with the conclusions of Arora and Sharma (2016). The CEO's twofold responsibility and ownership may explain the negligible effect of corporate governance on a company's capital structure, as noted by Javaid et al. (2023). However, corporate governance plays a crucial mediating role in the relationship between returns on equity (ROE) and the debt ratio, with a similar effect observed for ROE and the debt-to-equity (DE) ratio. This implies that a higher ROE and an increasing corporate governance index influence leverage and capital structure, consistent with Frank and Goyal's (2009) findings. Additionally, capital structure shows a negative association with Tobin's Q, as indicated by the Market-to-Book ratio. This study adds valuable insights to capital structure decisions and corporate governance literature.

# CONCLUSION

The paper aims to analyze the effect of firms' financial performance on capital structure decisions with the moderating effect of firm size and the mediating effect of corporate governance. This study concludes that firm performance is fundamental to capital structure decisions. The study results reinforce the Tradeoff and Agency Theory. Principals (shareholders) and agents (managers) face agency issues in which the agent might not act in the principal's best interests.

Likewise, principals (creditors) and agents (shareholders) may experience conflicts of interest. The firm performance impact on decisions regarding the capital structure is supported by the corporate governance mechanisms that serve as a reservoir to strike a balance among these stakeholders, ultimately enhancing the economic worth of the firm's assets and enabling the maintenance of a proper symmetry between debt and equity. This relationship more strongly exists in large firms. Grounded on the tradeoff theory, this conclusion strives for firms to balance the cost and benefit that entail the optimal capital structure through effective practices in corporate governance. Corporate governance effectiveness increases with the growth in the size of the firm to optimize the firm's leverage position, balancing the appropriate tradeoff with ROE.

# THEORETICAL AND PRACTICAL CONTRIBUTIONS

Large firms with many stakeholders often encounter conflicting interests among the interest groups. The findings of this study suggest that corporate governance has a mediating effect in combination with firm size on the choice of debt policy considering ROE. Specifically, firms with larger assets tend to implement

governance practices, increasing debt levels. The study outcomes support the agency and tradeoff theories following the effect of corporate governance and firm size. Incorporating CG and firm size in the study model, this study contributes to these theories in the extended model. Further, the study increases the advocacy of the tradeoff and agency theories to increase leverage through effective corporate governance practices to attract stakeholders to increase performance in return for reciprocity. This optimal level of debt helps reduce costs and improve stakeholder satisfaction, ultimately leading to better firm performance. These findings help a firm attract prospective shareholders, creditors, and customers to excel in the competitive advantages. These findings assist decision-makers in optimizing leverage strategies through corporate governance practices. In a competitive business environment, neglecting governance issues can lead to failure to meet legal requirements and dissatisfaction among stakeholders.

### LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

This study used only secondary data to estimate the extent of ROE's effect on a firm's capital structure. This can be supplemented using qualitative data and primary information. In future studies, the same relationship can be tested using ROA and Market Growth opportunities.

## **AUTHOR CONTRIBUTIONS**

Conceptualization: Prakash Kumar Gautam, Prem Prasad Silwal. Data curation: Prakash Kumar Gautam, Prem Prasad Silwal. Formal analysis: Prakash Kumar Gautam, Prem Prasad Silwal. Funding acquisition: Padam Raj Joshi. Investigation: Prakash Kumar Gautam, Prem Prasad Silwal. Methodology: Prakash Kumar Gautam, Prem Prasad Silwal. Project administration: Prakash Kumar Gautam, Prem Prasad Silwal. Resources: Padam Raj Joshi. Software: Prakash Kumar Gautam, Prem Prasad Silwal. Supervision: Prakash Kumar Gautam. Validation: Prakash Kumar Gautam. Validation: Prakash Kumar Gautam, Prem Prasad Silwal. Visualization: Prem Prasad Silwal, Padam Raj Joshi. Writing – original draft: Prem Prasad Silwal, Padam Raj Joshi. Writing – review & editing: Prakash Kumar Gautam.

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## **APPENDIX A**

#### Table A1. Sample firms with their nature

SN	Name of sample firms	Data from	Data to	Observations	Nature	BOD	Indep. director
1	Unilever Nepal	2016	2022	7		7	1
2	Bottlers Nepal (Balaju)	2016	2022	7		8	1
3	Bottlers Nepal (Terai)	2016	2022	7	Manufacturing &	7	1
4	Himalayan Distillery Limited	2016	2022	7	Processing	6	1
5	Nepal Lube Oil	2016	2022	7		8	1
6	Chilime Hydro	2016	2022	7		11	1
7	Butwal Hydro	2016	2022	7		10	1
8	Barun	2016	2022	7	······································	7	1
9	Aankhu Khola	2016	2022	7		6	1
10	Sine Hydro	2016	2022	7		8	1
11	National Hydro	2016	2022	7		6	1
12	Arun Hydro	2016	2022	7	Hydropower	5	1
13	Arun kabeli	2016	2022	7		5	1
14	Khanikhola	2016	2022	7		7	1
15	Sanima Tamor	2016	2022	7		7	1
16	Upper Tamakoshi	2016	2022	7		13	1
17	Soaltee Hotel	2016	2022	7		11	1
18	Oriental Hotel	2016	2022	7		7	1
19	Taragaon Hotel	2016	2022	7	Hotel & Tourism	11	1
20	Chandragiri Hill resort	2016	2022	7		7	1
21	City Hotel	2016	2022	7		5	1
22	Salt Trading	2016	2022	7	Teedine	11	1
23	Bishal Bazaar	2016	2022	7	Trading	7	1
	Total firm-years			161			