CORPORATE GOVERNANCE AND PERFORMANCE OF FIRMS IN SUB-SAHARAN AFRICA: THE ROLE OF CAPITAL STRUCTURE

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Abstract

The paper investigates the role of capital structure in the relationship between corporate governance and firm financial performance in Sub-Sahara Africa. The paper uses data from 60 firms from 30 Sub-Saharan African countries. The fixed effect model and the mediated regression analysis were used for the estimation. The paper finds that board size, board independence, audit committee size and audit reputation increase firms' financial performance, but female directorship and ownership concentration do not. Capital structure improve firm financial performance. Board independence, female directorship, audit reputation and audit committee size positive effect on capital structure. Finally, there is moderation effect of capital structure on corporate governance (board independence, audit committee size, audit reputation) and firm financial performance.

Keywords: Corporate Governance, Firm Performance, Capital Structure, Sub-Saharan Africa

1. Introduction

Corporate governance is a management mechanism which aligns the interests of all stakeholders in organization (Jensen and Meckling 1976). It is a used to mitigate agency conflict in an organisation. An Agency problem occurs when managers (agents) of a firm put their interest ahead of those of owners (principal). Capital structure, on the other hand, is the choice between equity and debt financing a firm (Ngato et al. 2019). Firm performance measures how firms use their assets to generate profit. The choice of capital structure is tied to corporate value, and the failure to adopt effective capital structure decision could result in conflict among shareholders of firm. Shareholders have orientation towards equity value while debtholders have orientation towards debt value. Managers can advance their interests over shareholders by building an empire (Jensen and Meckling 1976). Again, managers could advance the interest of shareholders and ignore debtholders through suboptimal investments. Therefore, quality corporate governance is important.

The lack of good corporate governance in businesses presents crises for that country. For instance, when firms become highly geared - or when they record a high short-term debt, which is mostly due to poor firm governance, financial crises would occur. The Asian crises that occurred in 1997, and the Global Financial Crises in 2007 are examples of failure to adopt good financing decision in a firm (Throt, 2020). The tradeoff theory explains that firms choose optimal capital structure for interest and tax shield benefits. Many financial crises are associated with firms becoming highly leveraged, therefore the relationship between corporate governance and capital structure are important research focus.

Can leverage moderates the relationship between corporate governance and firm performance? Literature in Africa shows extensive studies, but not without further studies. The literature mainly addresses the effect of; (i) corporate governance on firm performance (e.g., Chen et al., 2020; Hossain et al., 2021), (ii) the effect of corporate governance on capital structure (e.g., Connelly et al., 2019; Jiraporn et al., 2021), and (iii) the effect of capital structure on firm performance (González, 2021; Vithessonthi and Tongurai, 2019). key findings from these studies are summarised as follows; (i) corporate governance has a direct relationship with firm performance (Chen et al. 2020), (ii) corporate governance negatively influences firm performance (Hossain et al., 2019), (iii) corporate governance contributes significantly positive to capital structure (Connelly et al., 2019), (iv) corporate governance and capital structure have negative relationship (Jiraporn et al., 2021), (v) capital structure positively and significantly influences firm performance in Africa (González, 2021), and (vi) capital structure has a negative influence on firm performance (Tongurai, 2019). These results confirm the inconsistencies in findings on these variables and their relationships in Africa. Addressing the research question of whether capital structure mediates corporate governance and firm performance is relevant for the following reasons; (i) the moderating results from this study would explain the mixed findings on corporate governance and firm performance, (ii) capital structure which is the moderator variable provides understanding on the behaviour of corporate governance around firm performance, (iii) analysis of the existing studies indicates that no study exists on the role of capital structure variables on corporate governance and firm performance in Sub-Saharan Africa. Due to the mentioned limitations, this study fills gaps by investigating the role of capital structure on corporate governance and firm performance in Sub-Saharan Africa.

2. Literature Review

Corporate Governance is framework of laws, policies, institutions and processes thatsignificantly affect the approach, administration, control and direction of a company, Cadbury (1992). The term 'Corporate Governance' became popular in the 1980s following corporate failures. Corporate governance enhances the compliance of some key business issues including transparency and accountability in organizations (Waweru, 2013). Corporate governance relates directly to the sustainability of businesses, and the absence of it increases the probability of firm financial instability (Khalaf 2013; Meah 2019). The dimensions of quality corporate governance are discussed in the next section

Board size is the number of members on a company board (Chancharat et al., 2012). Board size is important corporate governance tool. It is used to mitigate corporate failures (Chancharat et al., 2012). It is used to monitor and supervise key activities and play top management functions. Literature review indicates that, while firm board plays important managerial role, there is no appropriate number a board should have. Literature argues that optimal board size is dependent on firms' flexibility, cost of monitoring and size (Uchida, 2011). Some countries in Africa have guidelines for appropriate board size based on size, complexity and structure of the firm.

Board independence is the proportion of outside directors on a company's board (Uche, 2020). By definition, independent directors are neither shareholders nor executive members in a firm. Independent directors possess peculiar qualification required for efficient role delivery. Independent directors may possess higher degree of knowledge, and as such expressed more interest in debt financing option. Therefore, the inclusion of independent directors on board may

increase higher debt financing (Berger et al., 1997). The membership of independent directors is not expected to be more than nine years from the date of appointment. In line with the literature, this research expects that board independence will have positive influence on leverage.

The audit committee is the sub-group of the board used to ensure accurate financial reporting process. The audit committee provides advice in selecting external auditors. Audit committee controls management, and ensures that financial statements are reliable, credible and has economic value (Allison et al., 2014; Harry and Rav, 2008). Studies show that audit committee provides information regarding the company's credit risk (Chen et al., 2016). This affects the company's access to loan finance. Therefore, effective audit committee will increase credit access.

Female directorship is the proportion of females on a firm board (Chen et al., 2016). There is a growing belief that female directorship improves board efficiency. In this regard, Norway is the first country in the World to explicitly set a 40% slot for females on a company's board. Female directors can leverage communication, empathy, organizational management skills to improve firm performance compared to their male counterparts (Zelechowski and Bilimoria, 2014).

Ownership concentration is governance mechanism used by owners to control and influence management (Zelechowski and Bilimoria, 2014). Agency theory argues that concentrated ownership will enhance firm monitoring and mitigates agency conflict (Suto, 2003). Ownership composition may influence firm outcome due to agency implication in a firm (Claessens and Fan, 2022). However, firms with strong ownership concentration may cause conflict between shareholders and minority groups in the firm

Capital structure is concerned with the mix of long -term debt and equity used by a firm in its financing needs (Watson and Head 2014). It focuses on the combination of debt and equity that a firm employs in terms of its finance requirements. Debt and equity are important performance indictors (Kannan, Murugan and Arunbarath, 2020; Jaworski and Czerwonka, 2019). Due to this, companies critically evaluate the mixed of debt and equity financing options. There are benefits and drawbacks in the use of debt or equity by firm in its long- term financing decision. While debt is cheaper than equity due to its tax deductibility, equity enhances company's gearing position. Debt increases financial risk of a company, but enhances market value (Miller, 1977). Equity holders have residual interest in company and due to this bear the highest level of risk. Managers should be concerned about the capital structure of a firm because to ensure sustainability.

Empirical studies show that corporate governance affect performance. For instance. Gerged and Agwili (2020) examine empirically the influence of corporate governance on firm performance in on 3000 listed firms in Saudi Arabia after the corporate governance reforms in 2011. They find that corporate governance practices increase market values but not profits. This implied that voluntarily 'comply-or-explain' corporate governance regime does not always yield positive outcome. Bhatt and Bhatt (2017) study corporate governance and firm performance in Malaysia from 2008 to 2013 on 113 listed companies. They construct corporate governance index using independent directors, non-executive directors, board size, board meeting, board attendance,

director's age, director remuneration, director stock ownership and board committees. They find that quality corporate governance increases firm performance. Similarly, Mardnly et al. (2018) investigate the influence of corporate governance on firm performance in Syria from 2011 to 2015. Their study measures firm performance with ROA and Earnings per share and Return on Assets. Their findings reveal that ownership structure has a positive significant impact on firm performance. Moreover, Puni and Anlesinya (2020) study corporate governance mechanism and performance of listed firms in Ghana from 2006-2018. Their findings reveal that inside and outside directors, board size, meetings, ownership structure) have significant positive effect on firm performance. However, board committee and CEO duality negatively influence firm performance. Similarly, Sarpong-Danquah et al (2018) analyse the relationship between corporate governance and financial performance of 11 listed manufacturing firms in Ghana for the period of 2009-2013. Their study used gender diversity, board diversity and board size as proxies for corporate governance, and ROA and ROE as measures for financial performance. They employ analysis generalized least squares (GLS) panel regression model. They find that board independence and board gender diversity have positive relationship with ROE and ROA.

Over the years, there has been a rise in concerns on corporate governance and capital structure. Due to that various scholars' empirical studies on corporate governance and capital structure are growing. For instance, Sewpersadh (2019) study corporate governance and capital structure in South Africa from 2011 to 2016 for 130 listed companies. They find positive relationship between director ownership and leverage. Dzulkirom and Rayahu (2016) study corporate governance and capital structure using top listed 100 companies listed on the Indonesian Stock exchange from 2010 to 2012. The Generalised Structured Component Analysis (GSCA) estimation reveals that board size negatively affects corporate governance index. Similarly, Meah (2019) assesses the efficiency of corporate governance on capital structure in Bangladesh listed firms. Data were gathered from the annual report of 40 manufacturing listed firms on the Dhaka Stock Exchange for the years covering 2013 to 2017. The results indicate an inverse relationship between larger board and audit committee size, high foreign ratio and leverage ratios, and capital structure. The findings further reveal a positive relationship between board independence, top board directors and capital structure. Moreover, Boateng et al. (2017) examine the relationship between internal CG mechanisms and capital structure decision on listed firms in China using data obtained from financial reports of 2,386 sampled Chinese listed firms from 1998 to 2012. Corporate governance was measured with CEO duality, ownership concentration and independent directors, while capital structure measured as the overall leverage and long-term leverage. Using a variety of statistical methods including OLS, fixed effect model and system GMM for the analysis. The results show that ownership concentration and independent directors significantly impact long-term leverage of Chines listed firms. Their findings further reveal that independent directors has direct impact on the long-term leverage of firms indicating that an increase in independent directors will increase the long-term leverage of firms. Zaid et. al., (2020) investigate the moderating role of gender diversity on corporate governance practices and capital structure decisions. Data for the study were gathered from six years annual report from 2013-2018 of 33 Palestine companies listed on the PEX. Their research adopted leverage as a proxy for capital structure while board independence, board size and CEO duality were adopted as measures for corporate governance. The study uses OLS, fixed effect and random effect for the estimation. Their results show that board size, board independence and CEO duality positively influence capital structure. Naseem et al. (2019) study CEO characteristics, capital structure and firm performance in Pakistan from 2009-2015. The

study reveals that capital structure partially mediates the relationship between CEO characteristics (opportunistic, longer term, age, education) on firm finical performance. Iqbal and Javed (2019) investigate the moderating role of corporate governance on the relationship between capital structure and firm performance from 2009-2014 by using fixed effect methods. The study shows that corporate governance positively and significantly moderates capital structure and performance. Okiro *et al.* (2015) assess the effect of corporate governance and capital structure on firm performance in East African communities. Their study employs a census survey of 98 listed firms from 2009-2013. The study reports a positive influence of corporate governance and capital structure. The study further reveals that capital structure positively intervenes corporate governance and firm performance.

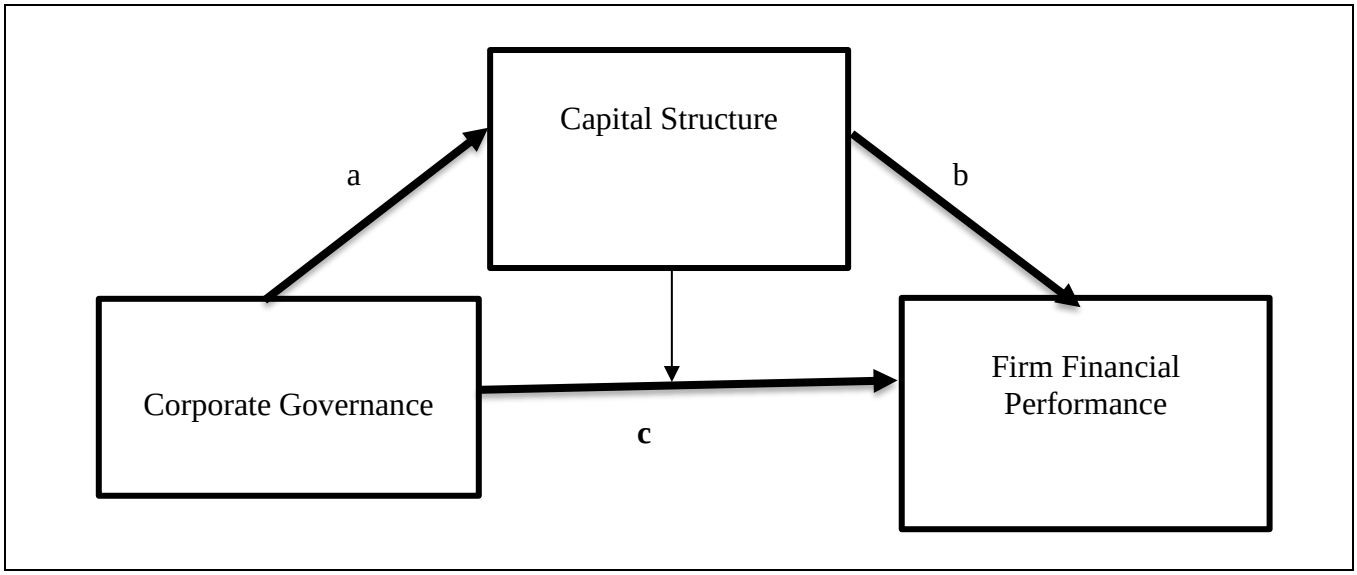

Figure 2.1: The Model of Capital Structure on Corporate Governance and Firm Performance
Source: *Author's Construction based on existing literature*

Mediation is illustrated graphically in Figure 2.1, which shows that corporate governance affects firm financial performance both directly (i.e., path c) and indirectly (i.e., the combination of paths a and b) through the mediator capital structure. The indirect effect represents that part of the effect of corporate governance on firm performance that is mediated by capital structure, with the magnitude of this effect represented by the product of the paths a and b.

3. Data and Methodology

The paper uses a panel data of 60 listed companies from 30 Sub-Saharan African countries based on capitalisation and profit margin. Top companies based on the said criteria are selected to avoid the use of less financially significant firms. The study measures capital structure which is the dependent variable in equation 3 as the ratio of debts to assets (Vithessonthi and Tongurai, 2015). Firm performance is the dependent variable in equations 1, 2 and 4 and measured with return on equity, following Chen et al. (2005) and Bhabra (2007). The paper uses return on assets (ROA) as a robustness check. ROA is measured as the ratio of earnings after interest and tax and total assets.

The paper uses five (5) corporate governance variables which are audit committee size, board independence, audit reputation, board diversity, ownership concentration (see., Detthamrong et al.2017). The study measures board size (BD-Size) as the total number of board members, consistent with Bhagat (2018); board independence (BD_IND) as the proportion of outside directors (Detthamrong et al. 2017). Ownership concentration (OWNCON) as the proportion of equity stock of the top shareholders. Audit reputation (BIG4) uses dummy variable where 1 represents a firm audited by the top 4 auditing firms, and 0 for otherwise. The big four auditing firms are Ernst & Young, KPMG, Deloitte and PricewaterhouseCoopers. Audit committee size (BD_AUDIT) is a proportion of members of the audit committee. Female directorship (BD_WOMEN) is the proportion of females on the board. The study controls for in other to adjust for size effect across the firms.

Table 3.1: Variable Description and Measurement

VARIABLES	**DESCRIPTION**	Citation
Return on Assets (ROA)	Earing after interest and tax divided by total assets	Detthamrong et al. (2017)
Return on Equity (ROE)	Earnings before interest and tax divided by total equity.	Chen et al. (2005)
Leverage	Ratio of total debt to total assets	Vithessonthi and Tongurai, (2015)
Audit committee size	Total members of audit committee	Munisi and Randoy (2015)
Female Director	Proportion of female board directors and total directors	Okiro et al. (2015)
Ownership concentration	Proportion of common stock held by the top shareholders.	Detthamrong et al. (2017)

Audit Reputation	Dummy variables where 1 is used to represent whether a firm uses one of the top four auditing firms, and zero otherwise.	Detthamrong et al. (2017)
Board independence	Proportion of outside director and total directors	Puni and Anlesyina (2020)
Firm size (SIZE)	Natural logarithm of Total Assets	Khalaf (2013)

The fixed effect model for equations 1-3. The study further adopts the mediated regression analysis to establish the mediation role of capital structure on corporate governance and firm performance in equation 4. Here, firm performance represented by ROE is the dependent variable, organisational environment variables as independent variables, whiles leverage is used as a mediating variable.

$$ROE_{i,t} = \beta_o + \beta_{1it}BD\_IND_{\ i,t} + \beta_2 OWNCON_{i,t} + \beta_3 BD\_Size_{i,t} + \beta_4 AC\_Size_{i,t} + \beta_5 BD\_Women_{i,t} + \beta_6 BIG4_{i,t} + \beta_7 FS_{i,t} + e_{i,t} \ldots\ldots\ldots 1$$

$$ROE_{i,t} = \beta_o + \beta_{1it}LEV_{\ i,t} + \beta_2 FS_{i,t} + e_{i,t} \ldots\ldots\ldots 2$$

$$LEV_{i,t} = \beta_o + \beta_{1it}BD\_IND_{\ i,t} + \beta_2 OWNCON_{i,t} + \beta_3 BD\_Size_{i,t} + \beta_4 AC\_Size_{i,t} + \beta_5 BD\_Women_{i,t} + \beta_6 BIG4_{i,t} + \beta_7 FS_{i,t} + e_{i,t} \ldots\ldots\ldots\ldots 3$$

$$ROE_{i,t} = \beta_o + \beta_{2it}BD\_IND_{\ i,t} + \beta_3 OWNCON_{i,t} + \beta_4 BD\_Size_{i,t} + \beta_{5it}AC\_Size_{\ i,t} + \beta_{6it}BGD_{i,t} + \beta_{7it}LEV_{\ i,t} + (\beta_6 IND_* LEV + \beta_7 OWNCON_* LEV + \beta_8 BS_{i,t} * LEV) + e_{i,t} + u_{it,} \ldots\ldots\ldots 4$$

Where: ROE=Return on Equity**,** SIZE= Firm Size**,** BD_Size= Board Size**,** FS=Firm size, OWNCON =Ownership Concentration**,** IND**=**Board Independence**,** AC_Size =Audit committee size, BIG4=Audit reputation, BD_Women=board gender diversity, BD_Size=Board size, and LEV is capital structure.

4. Results

The summary results in Table 4.1 show that ROE has a mean value of (0.023) with a standard deviation of (0.13). ROE has an average value of (0.371) with a standard deviation of (0.11). Capital structure has a mean value of (0.26) with a standard deviation of (0.20). This suggests that about 26 per cent of firms in Sub-Saharan Africa have a leverage of 20 per cent. Board independence has a mean value of (0.65) with a standard deviation of (0.43). Ownership concentration has a mean value of (2.34) and a standard deviation of (1.30). Female directorship has a mean value of (0.17) with a standard deviation of (0.14). This indicates that about 14 per cent of firms in SSA has on their board 17 per cent of female directorship. This represents a very poor female bard directorship.

Table 4.1: Summary Statistics

Variables	Minimum	Maximum	Mean	Std. Dev
ROA	0.453	0.075	0.023	0.13
ROE	-0.375	0.750	0.371	0.11
Leverage	0.00	0.65	0.26	0.20
BD_IND	3.542	12.325	0.653	0.43
OWNCON	43.76	23.65	70.65	17.754
BIG4	0.00	1.00	0.543	0.502
BD_WOMEN	0.00	0.45	0.17	0.14
AC_SIZE	0.00	0.45	3.07	0.40
Firm Size	6.324	11.654	8.765	1.654

Source: From the panel data obtained from the firm's annual reports

As expected, the correlation between ROA and ROE is (0.443) signifying that they are substitute measures for financial performance in Table 4.1. The correlation between leverage and ROA is (0.092). The correlation between board independence and leverage is (0.065). The correlation of (0.196) is established between auditor's reputation leverage. The correlation between the corporate governance variables is weak and not exceeded (0.50). Generally, the correlation between all the study variables is less than (0.07) which indicates the absence of multicollinearity problem. The decision rule states that a variable must be dropped when it has a correlation coefficient of more than (0.8) with other variable to eliminate the problem of multicollinearity (Kenned, 2008)

Table 4.2: Correlation Analysis

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
ROA	1								
ROE	.443**	1							
LEV	.092****	.066**	1						
BD_IND	.043*	.004*	.065**	1					
OWNCON	.035*	.023	.062*	.008	1				
BIG4	.006	-.007*	.196**	.086**	.205**	1			
BD_WOMEN	.036**	.0054	.643**	.006	.0432	.026	1		
AC_SIZE	-.054*	-.065	.065	.076**	.0432	.032	.004	1	
FS	.065	.003	.076	.006*	.023	-.007	.054	.0278	1

Notes: The variables are explained in Table 3.1. ** correlation is significant at 1 % (two-tailed), * significant at 5 percent (two-tailed). BIG4 represents auditors' reputation measured by a firm being audited by the four renown auditing firms. FS denotes firm size, BD_WOMEN represent female directorship. 1, 2, 3,4,5,6,7,8,9 represents ROA, ROE, leverage, board independence, ownership concentration, auditor's reputation, female directorship, audit committee size and firm size respectively.

Source: From the panel data obtained from the firm's annual reports

Table 4.3: Effect of Corporate Governance on Firm Financial Performance

Dependent Variable: ROE

Variables	**ROE**
Constant	0.542***
	(0.231)
Board Independence (BD_IND)	0.789***
	(0.152)
Audit Committee Size (AC_Size)	0.459**
	(.200)
Auditors Reputation (Big4)	0.5421***
	(0.165)
Female Directorship (BD_WOMEN)	0.431
	(0.334)
Ownership Concentration (OWNCON	0.231
	(0.113)
Firm Size	0.453**
	(0.231)
Firm Fixed Effect	Yes

Year Fixed Effect	Yes
Adjusted R-squared	0.653
F-Statistics	54.754
No. of obs.	663

Notes: Robust Standard errors are in parentheses, ***, ** and * denotes 1, 5 and 10 per cent significant levels, respectively.

The results in Table 4.3 shows that board independence, audit committee size and auditors' reputation have significant positive effect on firm performance. However, female directorship and ownership concentration have no significant influence on firm performance. The positive effect of audit committee size, board independence, audit reputation on performance is supported by prior studies (eg. See Anderson et al. 2019; Jackling and Johi, 2019; Muniandy and Hiller, 2015). There are a number of reasons for selecting Big 4 audit company for audit service. Well-known audit firms have built their reputation of integrity and accountability over the years and having them audit a firm account reduces information asymmetry and signals market prospects for the firm. Companies audited by the Big 4 auditors are usually large or multinational companies with superior profit and effective work management. Smaller firm cannot afford the services of the Big 4 audit firms. Larger firms are usually associated with larger profit and it is not surprising that firms audited by the Big 4 auditors perform better. In addition, quality auditing will improve firm decision and consequently contributes to higher profitability.

Audit qualification improves firm performance. A member of audit committee is expected to have a higher qualification to execute assigned duties. Effective audit committee increases firm monitoring role (Aldamen et al., 2012). The AC is tasked to oversee the firm internal financial reporting process. It holds regular meetings with management and external auditors over the firms' financial statements, the accounting process and internal audit reviews. The audit committee holds the management and external auditors to higher accounting standard and it is expected that firms with effective audit committee have lower probability of frauds and financial scandals and ultimately achieve general firm performance.

The paper reports that board independence would contributes positively to firm financial performance. The results although inconsistent with Detthamrong et al. (2017), provide management insight on the importance of outside board of directors on a firm board. Independent directors on a board attract investors into the firm (Muniandy and Hillier, 2015). The presence of capable outside director is expected to improve the board performance and ultimately the general firm performance.

Table 4.4: Effect of Capital Structure on Firm Financial Performance

Dependent Variable: ROE

Variables	**ROE**
Constant	0.463***
	(0.112)
Financial Leverage	0.312**
	(0.102)

Firm Size	0.541**
	(0.243)
Firm Fixed Effect	Yes
Adjusted R-squared	0.331
F-Statistics	24.765
No. of obs.	400

Notes: Robust Standard errors are in parentheses, ***, ** and * denotes 1, 5 and 10 per cent significant levels, respectively.

The paper finds that capital structure positively affects the financial performance of firms in Sub-Saharan Africa. The results are consistent with prior findings (eg. See Goyal, 2013; Khalaf, 2013; Mardonne, 2019). Other studies, however, report a negative relationship, (eg. see Antoniou et al. (2008). The argument by Modigliani and Miller (1958) suggests that capital structure is not relevant in determining firm value and performance. On the other hand, other empirical studies suggest that the use of debt financing can improve firm financial performance due to improvement in creditors monitoring (Agrawal and Knoeber, 1996). Some studies report that the use of debt financing reduces stock price and as such performance (Vithessonthi and Tongurai (2015). The present study findings support the view that higher financial leverage or lower equity would improve firm performance. The paper establishes that if higher leverage is associated with vigilant creditors monitoring, then the creditors will ensure that the firm undertake profitable investments by strictly screening all projects. As such financial leverage improves firm financial performance.

Table 4.5: Effect of Corporate Governance on Capital Structure
Dependent Variable: Capital Structure

Variables	**Leverage**
Constant	0.763***
	(0.332)
Board Independence (BD_IND)	0.431**
	(0.163)
Audit Committee Size (AC_Size)	0.542**
	(.176)
Auditors Reputation (Big4)	0.321**
	(0.143)
Female Directorship (BD_WOMEN)	0.543***
	(0.165)
Ownership Concentration (OWNCON	0.432
	(0.342)
Firm Size	0.454
	(0.331)
Firm Fixed Effect	Yes
Year Fixed Effect	Yes
Adjusted R-squared	0.553

F-Statistics	58.31
No. of obs.	663

Notes: Robust Standard errors are in parentheses, ***, ** and * denotes 1, 5 and 10 per cent significant levels, respectively.

The results in Table 4.5 provide that female directorship, audit reputation, audit committee size influence financial leverage. The study finds that board independence positively influences financial leverage of firms. The results are consistent with Mortenger et al., (2020), but inconsistent with Detthamrong et al. (2017). Independent directors have ample knowledge which allows the board to pursue higher leverage. The study finds that AC size has a significant positive effect on firm financial structure, consistent with prior studies (e.g., Anderson et al., 2014; Harris and Raviv, 2018). The audit committee ensures the preparation of financial statements and the reporting of it. They ensure that the financial statements preparation and the reporting of the financial statements meet the set standards. The study results support the view that effective audit committee with the appropriate size could improve the committee performance and as such the general firm performance. The information about the market known by the committee will inform their decision on the use of more or low leverage financing.

Audit reputation has a positive effect on financial leverage, consistent with some studies, e.g. (See, Azizkhani et al.; 2019; Caramanis and Lennox, 2008). Financial statements provide relevant information to investors and some other key stakeholders of a firm. The information provided in the audit report reduces information risk. Here, the auditor's reputation adds credibility to the authenticity of the financial statements, and consequently would reduce its capital cost. Firms which are audited by the well-known auditing firms have high credit scoring. This credit credibility allows them to have access to more external finance thereby increasing leverage.

Table 4.6: Effect of Capital Structure on Corporate Governance and Firm Performance
Dependent Variable: ROE

Variables	**ROE**
Constant	0.431***
	(0.143)
BD_IND*LEV	0.431**
	(0.172)
AC_Size*LEV	0.476***
	(.176)
Big4*LEV	0.654***
	(0.242)
BD_WOMEN*LEV	0.431
	(0.543)
OWNCON*LEV	0.221
	(0.116)
Firm Size	-0.473**
	(0.121)

Firm Fixed Effect	Yes
Year Fixed Effect	Yes
Adjusted R-squared	0.432
F-Statistics	34.765
No. of obs.	663

Notes: Robust Standard errors are in parenthesis, ***, ** and * denotes 1, 5 and 10 per cent significant levels, respectively.

The results in Table 4.6 indicates that capital structure mediates corporate governance variables such as board independence, audit committee size, audit reputation and firm performance. The results contradict Detthamrong et al. (2017) who find that the above CG variables are not mediated by leverage on performance. The findings are supported by the view that weak corporate governance may lead to under- leverage or over-leverage of the firm. Highly leveraged firms may experience larger variations in performance. Similarly, leveraged firms have small variations in profits. Optimal capital improves firm performance. Second, board approves major firm's investments decisions. Due to this, the effect of corporate governance on firm performance is will depend on the ability of the board of directors to make quality investment and financing decisions. For instance, if two equal firms invest equally in a project which has a common performance outcome, the key difference between these two firms would be the quality of board of directors to make decision on the investment finance strategies and the project selection. Poor corporate governance which is associated with under leverage or over-leverage will to affect the investment selection and ultimately the performance.

The results in Table 4.7 confirm the directions and relationships showed in the previous Tables for the various objectives

Table 4.7: Robustness Checks for Equations 1-4
Dependent: ROA

Variable	Model 1	Model 2	Model 3
BD_Size	0.432**		
	(0.221)		
BIG4	0.543***		
	(0.143)		
BD_WOMEN	0.331		
	(0.215)		
OWNCON	0.432		
	(0.324)		
AC_Size	0.552**		
	(0.136)		
LEV		0.543***	
		(0.154)	
BD_IND*LEV			0.653**
			(0.276)
AC_Size*LEV			0.442*
			(0.11)
Big4*LEV			0.331*
			(0.112)
BD_WOMEN*LEV			0.432
			(0.323)
OWNCON*LEV			0.543
			(0.432)

Note: Models 1 estimates corporate governance and return on assets. Model 2 estimates capital structure and return on assets. Model 3 estimates the role of capital structure on corporate governance and ROA

Table 4.7 verifies the sensitivity of the findings; the study performs robustness tests to verify the sensitivity of the findings using ROA as a performance measure. The results confirm the results obtained from the panel fixed effect estimator in Tables 4.3, 4.4, 4.5 and 4.6. Except for female directorship, all the other variables have the same signs as those obtained from the panel fixed effect estimator. The results in both estimations are similar. Per these the robustness tests, the study concludes that the findings and quality of the estimations are robust.

5. Conclusion

Several firms have poor corporate governance mechanism which translates into ineffective board function to supervise effective capital structure decision. The inefficient system of corporate governance in firms is critical management issue attracting research discussions across the globe. This study investigates the effect of corporate governance and firm financial performance mediated by capital structure in Sub-Sahara Africa. The study uses annual financial dataset of 60 firms from 30 Sub-Saharan Africa country from 2010-2020. The study finds that board size, board independence, audit committee size and audit reputation contribute positively to firm financial performance. However, female directorship and ownership concentration show no significant effect on firm performance. Moreover, capital structure increase performance of firms. Also, board independence, female directorship, audit reputation and audit committee size affect capital structure. Lastly, capital structure plays a significant role on corporate governance (board independence, audit committee size, audit reputation) and firm financial performance. The results imply that the Security and Exchange Commissions of the various countries in the region must introduce, or reform the internal and external mechanism of corporate governance on firms and ensure that companies are effectively managed and controlled, in that deviant companies must be sanctioned. There need to be improvement in corporate governance practices such as the expertise of the board. The size of the board should commensurate with the size of the firm so that there will be effective monitoring of the activities of the firms. An avoid the "one size fits all principle". Firms should ensure that the board is well balanced in terms of expertise in areas that matters most to the firms. Disclosures, audit committees and ownership structure. The study highlights the importance in ensuring transparency and fairness in firms. With a well-functioning board and an effective audit committee to enhance transparency, the performance of firms will improve remarkably. The study results imply that managers could increase the proportion of debt to equity in their capital structure (leverage) by raising more debt in an efficient manner. The cheaper cost of debt relative to equity will lead to an enhanced financial performance of their firms.

The study has limitation. For instance, the capital markets development among Sub-Saharan countries are significantly different and are at different levels of development, hence some of the countries used in the panel analysis, for the lack of effective capital markets supervisory control institutions, have not fully implemented the quality corporate governance guidelines.

Future research should expand this area of research by looking at the Granger-causality of corporate governance and leverage as mediator variables in influencing firm stability and economic growth in SSA.

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