

**CHIEF EXECUTIVE POWER OF DIRECTORSHIPS AND THEIR  
INFLUENCE ON PERFORMANCE OF LISTED FIRMS IN TANZANIA**

**By**

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**A Dissertation Submitted in Partial/Fulfillment of the Requirements for Award  
of The Degree of Master of Science in Accounting and Finance (MSc. A&F) at  
Mzumbe University ,2020**

**CERTIFICATION**

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled **Chief executive power of directorships and their influence on firm performance: a case of listed companies in Tanzania**, in partial/fulfillment of the requirements for award of the degree of Master of Science in Accounting and Finance of Mzumbe University.

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## **LIST OF ABBREVIATION**

CEO	Chief Executive Officer
CEOBM	Chief executive Board Member
FSIZE	Firm Size
BSIZE	Board Size
BINDE	Board Independent Directors
BACOM	Board Audit Committee
CEOYE	Chief Executive Officer Year of Experience
ROA	Return on Assets
ROE	Return on Equity
DSE	Dar es Salaam Stock Exchange
CMSA	Capital Market Securities Authority
CLRM	Classical Linear Regression Model
VIF	Variation Inflation Factor
OLS	Ordinary Least Squared
ML	Maximum Likelihood
BG	Breusch Godfrey
IV	Instrumental Variables
FE	Fixed Effects
RE	Random Effects
PE-Ratio	Price Earnings Ratio
IPO	Initial Public Offering

## **ABSTRACT**

The study examined the association between Chief Executive Officers only inside board members and firm performance. The study aimed to achieve the following specific objectives; to examine the relationship between CEO power and firm return on assets, and to examine the relationship between CEO power and firm return on equity. This study has extended the existing literatures on CEO power and firm performance, presenting models grounded predominantly on agency theory, stewardship theory and resource dependency theory.

This paper used unbalanced panel data regression analysis on a sample of 15 listed firms in Dar es Salaam stock exchanges for period of thirteen years from 2005 to 2017 observed from annual reports extracted via [www.africafinancials.com](http://www.africafinancials.com). To analyzing performances on panel data, researcher used both fixed effects and random effects models. The results indicated that, power from CEO only executive director do not influence firm return on assets and return on equity. Other findings confirmed no association with performance except firm size measured by natural logarithm of total assets found negatively related with return on equity.

The contributions consist of multiple outlook study of CEO power, characteristics, compensation and firm performance to broadly learn separately of their associations. The study has further extended discussion over the agency, stewardship and resource dependency theories viewpoints to seal the existing knowledge and theoretical gaps. Therefore, the evidence found from this study provides boards of directors' practical knowledge for comprehensive governance with additional avenue for the upcoming researches in corporate governance.

*Key words:* Chief Executive Officers, Board of Directors, Firm Performance.

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## **CHAPTER ONE**

### **INTRODUCTION AND BACKGROUND INFORMATION**

#### **1.1 Introduction**

Chapter one is organized as follows: sections are divided into background of the problem, statement of the problem, research objectives and research questions, scope of the study, and significance and limitations of the study. The chapter also provides a clear image what a researcher planned to address the problem.

#### **1.2 Background of the Problem**

Tanzania has not left behind to establish principles of good corporate governance practices. The capital Markets and Security Authority established guidelines of corporate governance practices to public listed companies and article 3.2.1 of the same permits the combined power of Chief Executives (Authority, 2002). However, this combination of CEO powers should be approved by shareholders and the disclosure should be made to public. The supporters of combined role in developed economies arguably advocates such structure provides the board with sufficient and timely information on companies' operations. Such combination of powers brings unified command structure and steady management direction, and makes a cooperative and shared atmosphere for board decision making. (Vo, 2010). However, this combination might abuse their appointments of trust for making own profit in expense of their companies, and ultimately at the expense of the appointing authorities.

Supporting Adams, Almeida, and Ferreira (2009) approach, the organizational of Chief Executive Officer (CEO) power is determined by three combined titles; the CEO duality, CEO is the founder of the firm and CEO as the only internal in board of directors.

CEO duality considered to be the first determinant of CEO power. Dual refers to board leadership structure in which the top executive wears two caps; one as Chief Executive Officer or President of the firm and the other as chairperson of board of directors. In contrast the board leadership structure may be referred as independent structure (CEO non-dual) if the Chief Executive Officer, President or any individual

who is not in executive position in which different individuals serve such positions described.

An emphasis of ongoing discussion to the duality role of CEO in the company provides disagreements (Alibrandi, 1985). Supporters of these two hats of CEO argues that the major issue is to have a clear direction for the objectives and implementation of strategies (P. A. Stoeberl & B. C. J. H. f. c. d. Sherony, 1985) and such unification of these roles provides a central direction for corporate leadership. Studies on CEO duality were considered to be area of research because of different effects in the industry. Chen, Lin, Yi, and Control (2008) admitted that for the past years, companies in the world considerable attention on examining the link between CEO duality and firm performance. In United states and the United Kingdom, the division of roles of CEO and Chairperson was a debatable issue, but other parts of Europe this division of role is already compulsory (Huse, Boards, & Creation, 2006). In the period from 1999 to 2003 many companies in the world changed board structural power from unified CEO leadership roles to non-dual structure, while smaller number of companies changed in the opposite direction. Different arguments were provided about such changes. Fama, Jensen, and Economics (1983) and Westphal and Zajac (1993) opposes the unified roles of CEO as they may hinder board's ability to monitor management and therefore, increase the agency cost. They further continued to argue on dividing such titles may create information sharing costs, conflicts between CEO and non-CEO chairman and inefficiency. In contrast, P. Stoeberl and B. Sherony (1985) on their study on board efficiency contends CEO duality gives distinctive margin leadership in strategy formulation and implementation and therefore, lead to better firm performance. Aftermath, an increasing number of studies conducted to examine the unified titles of CEO in both developed and developing economies. Different authors try to theorize firm performance could be affected by two hats of CEO as board chairperson and executive officer (Krause, Semadeni, & Cannella Jr, 2014); (Lam & Lee, 2008). The rationale behind such approach as these factors do not work in separation, it sounds more sense to use a wide-ranging measurement to measure CEO duality responsibilities. Although much has been learned from these studies, one latent

explanation from these researches is that CEO duality is fair for non-family firms, while non-duality is suitable for family -controlled firms. Therefore, researchers from developed economies determined that there is insignificant relationship between CEO duality and firm performance.

The second measure of CEO power is being chief executive officer of the firm at the same time the founder of the firm. Founders form companies are liable for the organizations. The empirical researches show inconsistency relationship between CEO founder and firm performance.

According to (Jayaraman, Khorana, Nelling, & Covin, 2000) on his study of ninety four CEO founders and non-founders managed companies concludes that the CEO holding 3 year tenure and the founder of firms has insignificant effect on stock returns, but firms size and firm age as control variables moderate the relationship of CEO founder and firm performance. On the other hand, Adams et al. (2009) results found CEO founder status has good performance on firm and this makes them holds their CEO titles after tenure. Accordingly, founder CEOs are inclined to risk (risk takers) to earn high returns. With these arguments the founder CEOs may not take into account of other members opinions within the firm and hold individual decisions built on perception (Xiao, Alhabeeb, Hong, & Haynes, 2001)

Final determinant of CEO power is when CEO is the only internal board member. According to agency theory, inside directors as board member weakens the power of the board by the same token, CEO as lone internal board member holds more easily the board. Hence, in what follows the researcher analyzed the relationship between CEO as only inside administrator and firm performance.

In Tanzania, the composition of the board of directors is governed under Company Act, 2002 and regulated in accordance to firm's industry (Jangu, 2014). The financial institutions board of directors are controlled by Guidelines for Boards of Directors of banks and financial institutions, 2008, (Mori, Towo, & Studies, 2017). While for the public listed companies the corporate governance are regulated under Capital Markets and Securities Authority Guidelines of corporate governance practices (Authority, 2002). The purpose of these guidelines is to strengthen company

governance practices in all public listed companies so as to take the level of governance in line with global trend.

All companies in Tanzania are controlled by active boards that lead and offer strategic guidance and provide direction to the company (Naila & Issues, 2013). The board of directors is appointed to act on behalf of shareholders so as to run the operation of the business. In other words, the boards are directly responsible to shareholders and every year end they have to provide reports on the performance of the firm, its future plans and strategies to shareholders. In Tanzania, board meetings are held periodically and every single meeting must have a chairperson whose responsibilities is to ensure the meeting for which it was beckoned, is correctly attended and the conclusions taken on board are passably reflect the view of the whole members (Suleiman, 2010)

The decisions of the board pass through various board structures that may involve workers union (taken by CEO in the board), board committees and finally board meetings. The power of CEO therefore, believed to influence the decision of the firm in achieving its objectives (Huse et al., 2006). The CEO insider in Tanzania, is one of the common practice in board formulation that may influence decisions and therefore, profitability. Mwemezi (2011) on his study on succession plan, concluded that there is a strong sentimentality for the listed companies that suggested and adopted the need to disentangle powers of CEOs. The presence of unsophisticated markets, weak regional integrations and undeveloped capital markets called attention to the researcher to pursue this study relative to developed countries. It is apparent that despite of much has been learned from developed countries, there is little studies conducted in developing countries and particularly in Tanzania.

### **1.2.1 Corporate governance**

According to Leuciuc, Popescu-Cruceru, and Administration (2014), the requirements for control and regulate company affairs are provided by two main tools which are; The Companies Act and its Memorandum of Association (company constitution). The later regulates inside business matters and how the board members relate and make decisions for the company affairs. The responsibilities of the board

among others is the oversight functions on the affairs of the business. It is an outstanding key instrument to control managers' actions and advise them on business strategy identification and implementation. The board of directors are also responsible for ensuring firms keep proper books of accounts. In some occasion, any director who attempt to trade-out of difficulty and fail, may be found guilty of illegal trading and can be made individually liable (Adams et al., 2009).

The appointments and functions of CEOs in public entities is quite different from private companies. In state owned enterprises, the appointment roles are vested by President of United Republic of Tanzania and are the employer in the respective ministries with limited powers. To mention few limitation, they are not the appointing authority for the companies/institutions entrusted, they can terminate but not employ (Bana, McCourt, Research, & Practice, 2006). The pragmatic statistical evidence from Dar es Salaam Stock Exchange depicts listed companies that have CEO as only board member insider is adequate and conclusive. Out of fifteen sampled publicly listed firms, 70% average firms' boards are structured with CEOs inside board members. Therefore, this study examines the effect of CEO inside board and listed firm performance in Tanzania.

### **1.2.2 Dar es Salaam Stock of Exchange (DSE)**

In Tanzania, the Capital Markets and Securities Authority (CMSA) was established in 1995 by the Capital Markets and Securities (CMS) Act, Chapter 79 R.E. 2002. The CMS Act is supplemented by 19 Regulations and Guidelines governing various aspects of capital markets. CMSA turn out to be operational as an independent body in 1995/1996 financial year. The formation of CMSA was followed by comprehensive financial sector reforms in the early 1990s that intended to develop capital markets in Tanzania. Capital markets are vital as they offer suitable mechanisms for marshaling long term savings and ensuring effective distributions of resources to productive sectors so as to stimulate economic growth. One among functions of Capital Markets and Securities Authority is to license and regulate stock exchanges, dealers, brokers and their representatives and investment advisors.

Tanzania has one stock markets incorporated in 1996 as limited company by guarantee without share capital, called Dar es Salaam Stock Exchange (DSE). The principal role of stock exchange is mobilization of resources and directing the same to productive sectors. Other functions of stock exchange are; to provide a market for listed securities by providing a room for those who wish to join or leave, to exchange securities for cash; ensure buyers and sellers can do so at a price determined by market forces; and facilitate raising of capital for the business by selling new shares/bonds at the better prices (lowers the cost of capital) and increase profit of the listed company. As of July, 2020, there are 28 listed companies. Table 1 summarizes the present market listing

**Table 1: DSE listed firms**

S/N	NAME	SECTOR
1	ACACIA MINING	Mining
2	CRDB BANK	Finance and Investments
3	DAR ES SALAAM COMMUNITY BANK	Finance and Investments
4	EAST AFRICA BREWERIES LIMITED	Industrial and allied
5	JUBILEE HOLDINGS	Finance and Investments
6	KENYA COMMERCIAL BANK	Finance and Investments
7	KENYA AIRWAYS	Commercial services
8	MAENDELEO BANK	Finance and Investments
9	MKOMBOZI COMMERCIAL BANK	Finance and Investments
10	MUCOBA BANK	Finance and Investments
11	MWALIMU COMMERCIAL BANK	Finance and Investments
12	NATIONAL INVESTMENT COMPANY LIMITED	Finance and Investments
13	NATIONAL MEDIA GROUP	Commercial services
14	NMB BANK	Finance and Investments
15	PRECISION AIR	Commercial services
16	SWALA OIL AND GAS	Oil and Gas
17	SWISSPORT TANZANIA	Commercial services
18	TANGA CEMENT	Industrial and allied
19	TANZANIA PORTLAND CEMENT	Industrial and allied
20	TANZANIA TEA PACKERS	Industrial and allied
21	TANZANIA BREWERIES LIMITED	Industrial and allied
22	TANZANIA CIGARATE COMPANY	Industrial and allied
23	TOL GASES LIMITED	Industrial and allied
24	TCCIA INVESTMENT	Finance and Investments

25	UCHUMI SUPERMARKETS	Commercial services
26	VODACOM TANZANIA	Commercial services
27	YETU MICROFINANCE	Finance and Investments
28	DAR ES SALAAM STOCK EXCHANGES	Finance and Investments

Source: DSE (2020)

Companies must have good financial standing and not adjudged bankrupt to acquire membership in DSE. There are several advantages of listing companies to the Exchange, to mention a few, listing securities widens the range of financing choices. Company is not bound to raise its capital in a certain way, it can finance its operations through listing of shares, financial institutions, directors and banks. Listing of companies in stock exchanges enable share ownership change (or privatization) by make a transfer of share from one individual to another. Also listing lowers financing cost such that all Initial Public Offering (IPO) costs are permissible expenses in deriving taxable income and therefore are taken into consideration in determining profit for tax purposes. Investors of listed companies are charged zero percent of capital gain as withholding contrary to unlisted companies that are charged 10%. Moreover, such investors receive tax advantages on dividend income received from listed companies (5% withholding) as opposed to unlisted companies (10% withholding tax)

### **1.3 Statement of the problem**

Tanzania has been attempted to address the challenge of corporate governance and firm performance. Unlike other countries especially developed ones, the most studies conducted in Tanzania attempted to compare board composition and financial performance. The performance addressed were the function of; executive directors, non-executive directors (independent members), age of the firm, committee meetings and board meetings. While the outcome determined as return on assets and return on equity. Generally, result from researchers showed with executive directors, board and committee meetings have no significant impact when measured by ROA. While non-executive directors have significant impact with ROA Kagama (2017)

The establishment of Capital Markets and Securities Authority introduced guidelines for corporate governance practices by public listed companies which requires

companies to adopt and implement. As part of the efforts to address modern economic challenges, researchers conducted several studies on corporate governance. For instance, the corporate governance practices in Tanzania, quality of corporate governance practices of Tanzania Listed companies, Analysis of board composition and financial performance, and impact of board characteristics on the financial performance by (Kiure, 2002); (Matinde, 2013); (Kagama, 2017) and (Assenga, Aly, & Hussainey, 2018), respectively.

The seat of CEOs in the board of directors is one of the common practices in Tanzania and may influence decisions and therefore, profitability. This study differs with the ones conducted in Tanzania as it studies the relationship between CEO who is only executive board member over firm performance. The researcher tried to link powers and functions of CEO as the formulator and implementor of strategies, he/she may abuse powers granted for the expense of the firm and its shareholders. However, the empirical evidence in Tanzania is scant and inconclusive on whether CEO as only executive board member is associated with better performance. The outcome variables used as determinants of firm performance are similar to other researchers did (Kagama, 2017).

#### **1.4 General Objective**

The general objective of the study was to examine the relationship between CEO power and firm performance of listed firms in Tanzania.

#### **1.5 Specific objective**

The study is guided by the following objectives:

- i. To examine the relationship between CEO power and firm return on asset
- ii. To investigate the relationship between CEO power and firm return on equity

#### **1.6 Research questions**

- i. Is there a relationship between CEO power and firm return on assets?
- ii. Is there a relationship between CEO power and firm return on equity?

## **1.7 Scope**

Tanzania has 28 companies as of September, 2020 listed in Dar es salaam stock exchanges. This study has been covered by twenty-eight listed firms in DSE and the information used were from the period of financial years 2005 to the year ended 2017.

## **1.8 Significance of the study**

Among of the developing countries, Tanzania gradually continues to open its equity market to international investment communities. This is because a growing business with larger needs for external financing has more benefits to accept better CEO powers however, dominance of CEO as head of operations in the firm and board member weakens the power of the board. The findings from this study contributes knowledge to the following:

### **1.8.1 To the general public**

The results from this study could cements the additional literatures that is apparently available on CEO power and firm performance particularly in developing economies where unsophisticated markets, weak regional integrations and undeveloped capital markets are the key parameters of economic growth.

### **1.8.2 To corporate governance**

The research provides the rating of chief executives who sit in their respective boards as only executive directors. The ratings on a scale of 1 to 100 for selected listed firms shows on average, 70% of firms' CEO are the only executive directors' seat on board. This helps top management understand the rating on corporate governance and have the authority to improve their governance practices.

### **1.8.3 To policy makers**

The findings might also help the legislature to draw references in formulation of strong governance policies suitable to our economic environment in attracting investments to private and government sectors

### **1.8.4 To other researchers**

The study may also provide a blueprint for further academic society to conduct studies regarding chief executive officers power in future.

### **1.8.5 To researcher**

It is one of the requirements that is expected by the researcher before being awarded master degree therefore, this study is for partial fulfilment of requirement for the award of degree of Master of Science in Accounting and Finance from Mzumbe University.

### **1.9 Limitation of the study**

The major limitation of this study was lack of previous studies in Tanzania that might be helpful to associate with, and from which industry to associate. This limitation was addressed by considering previous studies in other developing countries such as Nigeria (in Africa) and Bangladesh (in Asia) to mention a few. Other limitations beyond researcher's control were financial and time constraints. However, a well-formulated budget was implemented to ensure no resource present was put into unnecessary use and the study was accomplished. Also, corporate governance literatures particularly CEO inside board member are used to test theory, but little theories are constructed. It is either because of availability of data for testing theory or data for building theory are not available. In this study the use of secondary data for some firms have missing information and some have few documents that lack authenticity and therefore, cause biases.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter explains how different researchers conclude to the problem and which theories governs the study. It provides the operational definition of chief executive officers power, discussing theories of corporate governance applied to the study and the relevant conceptual framework.

#### **2.2 Operational definition of Chief Executive power**

CEO powers and responsibilities should be formalized in writings to assist the board to explain its expectations while, the board responsibilities are made in writings in the organization charter. The boards and CEOs both make high-level decisions however, difference on their roles are not set in stone but decided by company policy. The utmost powers of the board are to appoint a CEO and work effectively with him, set company directions, control and manage the affairs of the organization. Alternatively, as the head of executive team, CEO has the power to appoints and management of the key executive and management of personnel. Therefore, CEO depend on the board to delegate powers so as to empower him to take responsibility for the day to day operations and management of the organization (Lipton & Lorsch, 1992).

The utmost senior manager in the organization is typically mentioned as the Chief Executive Officer (CEO). The CEO may or may not also be a director on the board of organization however, in most countries including Tanzania the CEO is also a director on the board of organization (Authority, 2002). If the CEO wears these two roles, he/she commonly rendered a position of senior manager in the organization (CEO) and Managing Director (MD), but there are differences in legal standing and authority between CEO and MD (Cianni, Bussard, & Management, 1994)

The practices of CEO as both head of the executive team and a board member in the board of organization is common in private sectors while in non-profit and public sectors is less common. Sometimes board of directors meet without management personnel present for the following reasons; First, the executive directors absent

themselves from the discussion that deals with real or perceived conflicts of interests second, when the discussion is concerning the CEO's performance or remunerations and last, when the board or the relevant board committee is meeting with auditor to allow the auditor to be frank with board members as to the performance of the finance executive team. It also considered good governance practices for non-executive directors to meet without executive directors from time to time "closed session" to enable openness when the board wish to critically replicate the performance of the management (Practices & Conduct, 1995).

According, this study prolonged previous measure of CEO powers; CEO duality, CEO directorship, CEO tenure and CEO founder (Voordeckers, Van Gils, & Van den Heuvel, 2007). The position of CEO is regarded as the most powerful because of its important to create wealth and optimize future opportunities for the advantage of owners. The CEO power varies with his or her engrossment in the board of directors, chairperson of the board, or even CEO tenure (Papadakis, 2006). Therefore, this study examines CEO power from the perspectives of directorship.

### **2.3 Theoretical review**

The increase of powers and responsibilities of combined roles of CEO as board member and one who manages the operations of the firm matches with increase in accountabilities. Three different theories were employed to address the CEO power and firm performance; Agency theory, stewardship theory and Resource dependency theory. This section describes the theories used to the study and application of these theories in determining the impact of CEO power and firm performance.

#### **2.3.1. The Agency theory**

Agency theory emanated from the complications of risk distribution between shareholders and directors (Daily & Dalton, 1994), and could be stated that "corporate directors have an honest and financial obligation to perform in the best welfares of the parties they serve, particularly the shareholders". Supporters of this theory primarily believe that the responsibility to monitor the executives is vested to the board for shareholders' interest. The theory set emphasis on non-unified roles of CEO through separating power of management and that of other

stakeholders by introducing incentives and strenuous controls that will motivate executives and realize organizational goals (Mori et al., 2017). According to theory, corporate board plays vital role of screening, controlling and implementing agreement with managers and therefore safeguard corporate resources against abuse by management and reduces agency cost (Fama et al., 1983). The study conducted in China by Li and Tang (2010) randomly selected 2790 manufacturing firms in the year 2000 concludes to have strong effect of CEO hubris on firm hazard taking. Therefore, this theory strongly advocates powers of CEO is significantly increases the occurrence of poor performance.

### **2.3.2. Stewardship theory**

Stewardship theory opposes agency theory. Boyd (1995), examined positive association between CEO power and firm performance and the study was built by stewardship theory that supports CEO power as only inside director and as the managing director of the firm. It argues that the executives may not fundamentally interested by realizing personal goals but relatively, are inspired to work in the interest of shareholders. The executives are motivated by self-accomplishments of organizational goals and power but are not affiliated with value motivation. This theory has a positive look on management and assess them as trustworthy agent - principal relationship. Supporting dual leadership, this theory helps to make quick decisions, timely use of resources and captures opportunities arose in fluid environment and therefore, improves firm performance,(Finkelstein, Hambrick, & Cannella, 1996) and (Kang & Zardkoohi, 2005).

### **2.3.3. Resource dependency theory**

Another important role of the board is to distribute resources to management and give technical advice to owners of the firm. This core function is grounded from resource dependency theory that suggests the organization is not a closed system, it is influenced by other outside organizations and environmental uncertainties in which it can trades effectively through reallocation of resources (Casciaro & Piskorski, 2005). It is agreed that, there is an association between power and resource controls. If company A has power over company B, therefore company B depends on company A. It should be understood that firm performance is influenced by many

factors including; labour, capital, raw material etc. of which a CEO is essential person to distribute resource to the firm (Donaldson & Davis, 1991)

Overall, the three theories suggest that powers granted to chief executives influences the distribution of resources, monitors resources and ultimately increases firm performance.

## **2.4 Overview of empirical evidence from past researches**

Powers of CEO as board member and executive officer of the firm appeared to be important not only because has intimate understanding of the operations of the business but also is in better position to decide and control against the business. This has apprehended the attention of the researchers over the past few years and come-up with increasing literatures that enlighten the aspect of CEO power relative to firm performance.

Among empirical literatures sought to explain better aspect of CEO power are in relation to shareholders returns, return on investment, return on assets, return on equity, profit margin, bankruptcy, cumulative abnormal returns and price earnings ratio. In this review, we focus much on summary of the key findings from the major empirical literatures.

### **2.4.1. CEO duality**

Berg, Smith, and boards (1978) examined on how the dual roles of CEO as chairperson of the board and as managing director of the firm affects performance. The result of this findings concluded significant relationship when measured in terms of return on equity, however the report did not provide which kind of association. Consequently, this finding was implicated to be weak and confusing

From late 1980s, there is an increasing debate and divergence on CEO duality and its influence on firm performance. The empirical studies show that dual roles improve conformity and inspires firm performance (Tricker, 1994). It enables quickly respond to external environmental forces (Boyd, 1995); (Kang & Zardkoohi, 2005); and (Finkelstein et al., 1996). Boyd (1995) in his empirical setting of 192 publicly traded US firm in 1980 concluded that, CEO duality has positive influence when measured

using return on investment supported by environmental uncertainties and complexity of the firm.

Further such combined role helps merging of the firm's specific knowledge and experience. In different perspective, duality encourage egotism and disregarding the interest of different shareholders (Rechner & Dalton, 1991) by forming weak board committees that may not challenge powers and authority of the CEO. It is also difficulties to remove non-performing managers (Goyal & Park, 2002), and more importantly the duality encourages the establishment of belief, habit and attitude that become so difficult to change in the organization (Finkelstein & D'aveni, 1994; Zahra & Pearce II, 1990).

Among pioneers of CEO duality and firm performance, Rechner and Dalton (1989) presented their findings on the study that covers 141 firms from 500 good financial standing firms for the period of six years (1978-1983). Findings testified no association (no effect) on performance when measured as shareholders return. Similarly, Rechner and Dalton (1991) further used the same empirical setting of 141 firms as previously did, and the findings were a bit different from the first one. They found a negative relationship between CEO duality and firm performance measured in terms of ROI, ROE and Profit Margin. Other researchers' studies conducted on small size firms in developed and developing countries found different results when measured in different dimensions.

Two years later, Daily, Dalton, and practice (1993) conducted similar study with different empirical setting. They included 100 fastest growing small publicly listed firms in United States of America and 186 small publicly listed firms in USA with less than 500 employees and less than USD 20 million of revenues selected for the year 1990. The measure of performance for these firms were ROA, ROE and Price Earnings Ratio. The findings revealed no effects linked to CEO duality.

In developing countries like Bangladesh, Rashid and Control (2010) on his study uses both ROA and Tobin's Q as response variables (dependent) that explains the CEO duality roles. The ROA is explained as the ratio of Earning Before Interest and Tax (EBIT) and net book value of total assets while Tobin's Q measured as the ratio

of Market value of the firm and replacement cost of assets. The moderator variables used were board size, debt ratio, firm size, ownership structure firm growth, and firm age. In this study, he observed 825 firms listed in Dhaka Stock Exchange and obtained negative insignificant relationship between CEO duality roles and firm performance. However, when the control variables were included in the study, the results showed the association is conditional, subject to industry specific characteristics. He suggested further searches to be done on independence of board directors as moderating variables.

After rigorous discussion for some years, Dalton, Daily, Ellstrand, and Johnson (1998), tried to close the discussion of relationship between CEO duality and firm performance by conducting meta-analysis. They both use the agency theory and stewardship theory in 31 separate studies and randomly selected 69 different samples in 12,915 population. These researchers use market and accounting performance as indicators of dependent variable and the findings showed insignificant relationship between CEO duality and firm performance. In integrating the control variables, firm size measured by log of total assets found to have no influence.

In recent years researchers have shown interest on this topic and carefully added more interactions and categorization of CEO duality. They also considered other outcomes unlike firm performance by arguing that the dual roles are positively influencing the innovative knowledge. He (2009) with empirical settings of 215 considered larger manufacturing companies in United States in four years (1996-1999) and Ballinger and Marcel (2010), with empirical setting of 540 selected sample firms, both found feebly negative outcome when performance is measured as ROA, Tobin's Q, and bankruptcy.

Krause et al. (2014) in the study of 1500 population, 1000 financial standing firms and 53 moderate financial standing firms, examined separation of CEO power have positive influence on poor performed companies and negative influence on prosperity performance companies and most importantly, the separation of these roles is operative only for demotion separation. Further, attempted to relate the profit margin, company age and firm size, whether have impact to CEO two roles. On their

study of 55 firms listed in EU stock exchange a linear regression conducted to examine the hypothesis and concluded that CEO duality have trivial effect on firm performance.

A board with CEO who is only board member prepares and determines the agenda and table the information to the board for discussion. Such board is labelled as ineffective because they do not discourage conflict of interest (Jensen, 1993). On the other hand, Crystal (1991) argues that most private companies board members (outside/independent) are essentially employed by CEO and can also be removed by him. As such, the board members may not be willing to take a combative decision to CEO therefore, the performance may be optimized for the interest of CEO but not for the firm.

Empirical research observed the association between board structure and firm performance. Rosenstein and Wyatt (1990) concludes that shareholders' wealth is affected by the composition of outside directors by recording a positive stock price for any announcement of additional outside director. Byrd and Hickman (1992) on study of explore evidence of outside directors' monitor managers found that, bidding firm with the composition of at least 50% of outside directors have greater returns at announcement date than other bidders, except when the composition number is too high. In contrast, Yermack (1996) concludes no relationship between the ratio of outside directors when compared to firm performance. He further, gives proof that firm value and performance is negatively influenced by board size. Thus, the empirical proof for the position of inside and outside directors and firm performance is mixed.

Generally, the effect of CEO power and firm performance is undecided given various empirical results. Despite of mixed results from these literatures, the study on CEO power and firm performance deserves continuous and exhaustive examinations. To extend this literature, the researcher examined the association between CEO power (measured by inside board member) and firm performance. There are many explanations as discussed in above literatures to confirm the performance implication on CEO power is affected by business situations, complexity and uncertainties. Also

need to look on the individual characteristics of Chief Executive Officers that furnishes the power.

#### **2.4.2. CEO directorship**

Corporate governance includes a group of individuals serving as non-executive directors and executive directors with CEO participation. A good corporate governance aims to minimize agency problems and gives better firm performance. Most reduction of agency problem that has been addressed is to separate the position of CEO and Chair of the board (COB). However, similar to the joint positions that had been addressed (CEO duality), the joint role of CEO director may also create agency problem following their main functions of the board is to monitor and control top management (Bonn, Pettigrew, & Organization, 2009).

Tien, Chen, Chuang, and Organization (2013) with empirical setting of 112 companies in the computer-related industry USA found the result indicated power from CEO directorship is positively influences firm's return on assets and return on equity. That is the CEO involvement in the function of board (not as the chairperson) can positively influence firm's return on assets and return on equity. Therefore, linking the agency theory, the results support the theory for CEO power must significantly influence firm performance.

Brunello, Graziano, Parigi, and Finance (2003) on their empirical setting of 60 private companies listed in Italian Stock Exchanges over 9 years period 1988-1996 found CEO insider dominated boards is negatively related to firm performance when measured both in ROA and ROE. This means that dominance of CEO in board meetings have potential impact to poor performance hence, these findings support the theory that CEO as only inside board member has significant impact to ROA and ROE.

### **2.5 Conceptual framework**

The conceptual framework reflects the discussed theories of agency, stewardships and resource dependency.

In respect of conflicts of interest between the board of directors and owners of the firm, powers of CEO as suggested by the agency theory explains the control and

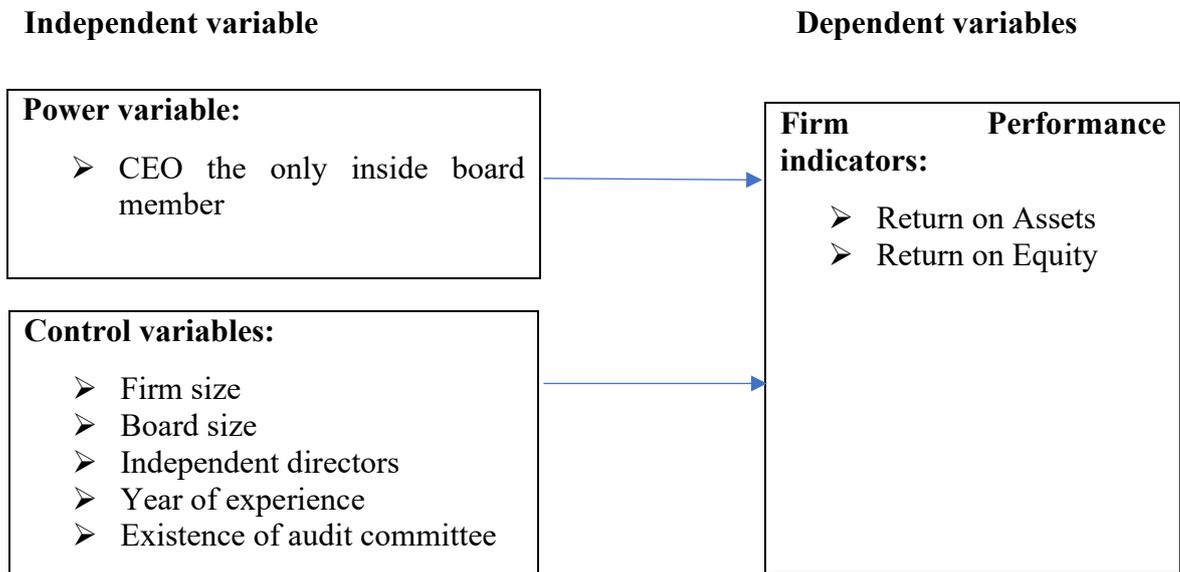
monitoring functions of the board of directors to the firm is compromised by the inside directors and thus advance the question of who monitors the monitor. Therefore, the likelihood of achieving financial performance is lower for the firm with CEO who is the only executive director in the board.

Stewardship theory clashes with the agency theory by suggesting the inside directors have been trusted to run the operations of the firm. Their responsibilities are primarily interested to achieve organization goals unlike individual goals therefore, powers of CEO are positively influencing firm performance.

The resource dependency theory suggests that powers and resource controls are associated. The CEO who also sit in the board of directors may easily achieve organizational goals because of controls having over resources. These resources could be allocated to relevant markets such as presence of potential customers, curb competitors, access to opportunity arises in the industry and create relationship with society and other business or political elites. This might take timely and quick decisions over economic condition prevails.

Therefore, the function of theoretical framework is to scrutinize the association of variables in particular, the CEO power and performance of listed firms in Dar es Salaam Stock Exchange from year 2005 to year 2017. Based on the above discussion, next is the conceptual framework developed by researcher in figure 2-1

**Figure 2-1: Conceptual framework**



Source: Researcher (2020)

## 2.6 Hypotheses Development

With regard to agency theory, the discussion on empirical evidences above demonstrates firms governed with CEO inside board member had lower performance ranks. In contrast with stewardship theory which suggest that firms with CEOs power make quick decisions based on the control they have over firm's resources entrusted and therefore, improves firm performance. This is also expected on resource dependence theory that links powers and resource distributions. In this study the researcher uses both theories to argue the power of CEO in relation to firm performance. Hence, the likelihood of achieving financial performance is lower for the firm with CEO who sits on board of directors (agency theory) and is greater with CEO who sits on the board (Stewardship and resource dependency theories). Building on the above discussions it is ostensible that the researcher has the following set of hypotheses;

***Hypothesis (H<sub>0</sub>):*** Chief Executive Officer as the only inside executive director has no influence on firm performance

***Hypothesis (H<sub>1</sub>):*** Chief Executive Officer as the only inside executive director has influence on firm performance

Consequently, altogether the empirical revisions that fashioned this study are used to substantiate the research. The conceptual framework and hypotheses established are expounded with suitable research methodology to test the hypotheses as subsequent chapter describes.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.0 Introduction**

After accomplishment of the conceptual framework developed and hypotheses as the initial stage of research process, a researcher tries to plan and formally identify the proper sources of data. This is completely undertaken by every researcher who participates in research undertakings so as to have a blueprint of what ways is successful going to start systematically the data collection process. Sreejesh, Mohapatra, and Anusree (2014) describe research methodology as necessary in research regardless of the form of study a researcher plans to undertake (descriptive or exploratory) as it guarantees the information collected for study is appropriate with the objectives of the research, reasonable and precise.

#### **3.1 Data description**

Quantitatively, because two dimensions of data are deployed, the researcher used panel data to study each firm over a period of thirteen years from 2005-2017. This is because (panel data) solves the problem linked with mistakes that arise in reporting previous state and the errors that arise because of essential communication between examiner and respondent (Greener, 2008). Accordingly, this study uses annually source data as the selection technique for analysis.

#### **3.2 Research design**

The research design supports the researcher to conduct his study resourcefully and professionally. A quantitative research analysis applies to this study uses published external secondary data for the companies listed in Dar es Salaam stock Exchange. The quantitative research design examines and clarifies the phenomena using mathematical built approaches after collecting the numerical data from target population. Quantitative approach is effective to the degree to which the measure of the phenomena adequately measures the planned concept and has been revealed to be essential factor of the research process (O'Leary-Kelly & J. Vokurka, 1998). The test of prearranged hypotheses and producing the outcomes is the prime objective of quantitative research. The results of using quantitative approach is useful to confirm

or hand-down the hypothesis made for establishing the association between independent and dependent variables by means of statistical methods.

Consequently, there is also drawbacks of using quantitative data to the study as it takes a snapshot of the phenomena and fail to deliver thorough explanation of the result or skill/experience of how substantial the association between dependent and independent variables are however, the quantitative research design overrides in the situation of assessment researches. Therefore, this research aims to investigate the association between CEO inside board member and returns both on equity and on assets for companies listed in Dar es salaam Stock Exchange.

### **3.3 Data Collection Method**

To collect data, researchers make use of various methods as data collection strategies. In this study, data collected based on variables of this study which are return on equity and return on assets. The duration of data for study covers thirteen years from 2005 to 2017 which represent recent economic state of firm.

Primary and secondary data are typical methods to gather information for research purposes. Primary data are gathered for particular research problem existing by means of procedures that appropriately fit best to the research topic. Every time primary data is collected, additional information supplemented to the existing store of shared knowledge and made accessible for reuse by collective research community then gathered as secondary data (Hox & Boeije, 2005)

This study uses secondary data extracted from [www.africanfinancials.com](http://www.africanfinancials.com) dataset. The dataset consists of 907 publicly listed companies in different listed stock exchange Africa. However, the researcher specifically studied a population of firms that are listed in DSE as could provide a clear picture of economic environment in particular Tanzania.

The sources of information extracted from this website are credible because access pool of these records made available to investors and other interested groups. In addition, the financial data extracted from this cite are undersigned by chairperson of the board and their chief executive officers thus, draws confidence to the researcher about reliability and accurate of information to use in the study. Further, different

written theses and journals of management used dataset to examine relationship from different economies e.g. (Krause et al., 2014) therefore, sources of data is clearly recognized in academics.

### **3.4 Population and sample selection**

#### **3.4.1 Targeted Population**

Any study that includes collecting data from every element of a population is called target population. It also defined as entire respondents who satisfies the intended set of standards for the particular study (Lim et al., 2009). Accordingly, the targeted population for study were twenty-eight (28) firms listed in Dar es Salaam Stock Exchange and 35 Chief executive Officers served from period 2005 to 2017.

#### **3.4.2 Sample selection**

As Glasow (2005) stated, it is extremely difficult to study the whole population (if large) instead, a representative and/or generalizable sample size is required to get accurate information. Sampling procedures for the purpose of this study includes listed fifteen firms in Dar es Salaam Stock Exchange (DSE). The sample size obtained were 15 listed firms chosen in their increasing order of total assets. The relevant information for this sample has been gathered for period of thirteen years from 2005 ending 2017 through DSE website and firm's annual reports. Total observations from these companies were expected to be 195 however, there is missing data from companies not listed for all thirteen years and therefore, twisted the intended number of observations.

The selected firms are from different industry but have similar rules that governs their operations. Their categorization of industry regards to international industrial classifications. Six companies from manufacturing industry, five companies from financial and insurance activities, one from transport industry, one from investment and the other one is from electricity, gas, steam and air conditioning supply making a total of 15 firms.

### **3.5 Operational definition and dimensions of elements**

Operational definitions provide essential measurements of concepts by looking its behavioral dimensions or characteristics of variables. The observable operational

definitions are measured using observations while non-observable definitions such as feelings are translated into observable so as to develop quantifiable elements (Sekaran & Bougie, 2016). The influence of CEO duality on firm performance stood with the help of variables; independent and dependent variables, from which the operationalization of these concepts is grounded on the theories. Each of these variables are explained in the following sections, and at the end, a table of summary with description of all variables applied to the study will follow.

### 3.5.1 Independent variable

In this study the independent variable is CEO power, and is defined as when an individual is Chief executive officer and the only internal administrator present in the board of directors. This study apparently substitutes this variable as the dummy variable “1” if the CEO is also a board member and “0” if not. The following table 3-2 explains the independent variables used in the study

**Table 3-2: Summary of independent variable used in the study**

Independent Variable	Measure	Hypotheses	
		Return on Assets	Return on Equity
CEO Board member	A dummy with value 1 if CEO is also inside director	Positive or Negative relationship	Positive or Negative relationship

Source: Researcher (2020)

### 3.5.2 Dependent variable

The research likewise uses dependent variables well-defined as the return on assets (ROA) and return on equity (ROE) as an accounting basis. Return on assets (ROA) is measured as the ratio of net income for the year to Total assets of the firm. It is the gauge of firm’s ability to generate earnings using own assets. The researcher uses EBIT unlike Net income for the year to avoid effects on differences in tax rates on profits charged over time and the financing structure in terms of domestic/foreign borrowing rates and any changes in capital structure over time (Padrtová, Vochozka, & Management, 2011). The Return on equity (ROE) is demarcated as the ratio of net

income to total equity (excluding preferred shares) or net income to total assets minus total liabilities and preferred shares. This indicates how well the management uses investments of ordinary shareholders to generate their earnings growth. The following table 3-3 explains all dependent variables used in the study.

**Table 3-3: Summary of dependent variable used in the study**

Variable	Measure
<b>Firm Performance</b>	
ROA	Return on assets (ROA) at the end of accounting period = (Net Income for the year) / (Total Assets)
ROE	Return on Equity (ROE) at the end of accounting period = (Net Income for the year) / (Total shareholders' equity)

Source: Researcher (2020)

### 3.5.3 Control variables

Showing the cause-effect relationship of any two variables (in this study the link between performance and CEO power) it is possible that some other factors outside the model might influence the dependent variable (performance). In understanding the extent of variation of independent variable in the model (CEO power) happened only because profitability (dependent variable), there shall be a need to include other control variables so as to know much the total variation of independent variables (produced by the presence of other independent variables not in the model) influence the performance so that we can compare the extent of variability of independent variable included in the model (Sekaran & Bougie, 2016, pp. 145-146) . The researcher considered the power of control variables whose changeability is generated outside the model that could pollute the cause - effect relationship set in the model (CEO power and firm performance), these variables discussed in the next paragraphs scale the degree of agency problems and the interior or exterior control mechanisms of the firm.

**i. Firm size**

Firm size is a central variable to influence performance of the business. Large firms have large markets and are able to modify the price of products and still earn high profits. Also, they have a solid negotiating power and enjoy economies of scale to acquire favorable financing conditions that in turn increases profitability (Connell, 2001). According to P. Stoeberl and B. Sherony (1985), large firms have the capacity generate retained earnings that can be used as the source of financing. In contrast, (He, 2009) advocates small sized firm heavily affected by agency problem. Like other previous research, this study reflects firm size as the natural logarithm of the book value of total assets.

**ii. Board size**

Previous researchers find either positive or negative relationship between board size and firm performance (Topak & Economics, 2011). Small boards are believed to be well-disciplined and can exercise their controlling roles very well while the large board is assumed to have directors with difference skills, knowledge and experience, may be difficult to manage and thus create agency problem (Hermalin & Weisbach, 2003). Therefore, the number of directors in the firm is used as the measurement of board size.

**iii. Board independence**

Independent directors are directors who's only link with the firm is their directorship. They do not participate in day to day running of the business as they do executive directors. Supporting Daily and Dalton (1994) literature, correlated a sample of 57 bankrupt and 57 survivor firms in United States found CEO duality accelerated the occurrence of bankruptcy, this effect stood stronger when the proportion of executives in the board of directors was high. This study measures the independent directors as the percentage of independent directors' present in board of directors (number of independent directors divided by number of directors).

#### iv. Year of experience

The relationship of CEO experience within company and financial performance is said to be negatively related. Hamori and Koyuncu (2015) found the CEOs experience who move from one industry to another similar industry with same firm size are associated with significant lower financial performance than CEOs without experience. The CEO year of experience in this study determined as the difference between firm's financial year and CEO year of appointment.

#### v. Audit committee

One of the corporate governance mechanisms is audit committee whose chairperson is a non-executive director and head of internal audit as secretary to the committee. Studies show that there is a positive and significant correlation between audit committee and return on equity. It indicates further profit margin has strong significant positive correlation with audit committee and improves firm performance once the financial reports are properly disclosed (Arslan, Zaman, Malik, Mehmood, & Accounting, 2014). Accordingly, if the firm has audit committee and consist of independent members then we assign value "1", and if firm has no audit committee or does not consist independent members then it is assigned "0" value.

**Table 3-4: Summary of control variables used in the study**

Control Variables	Measure
Firm size	Natural logarithm of firm's book value of Total assets
Board Size	Number of board directors in the firm
Board Independence	Percentage number of independent directors' present in the board of directors
Audit Committee	A dummy with value 1 if the firm has audit committee and consist of independent members, otherwise firm has "0" value.
CEO year of experience	Difference between firm's financial year and year of appointment of CEO

Source: Researcher (2020)

### 3.6 Regression Model Specification

A model is possibly be represented as a resemblance of something. In research, a model involves symbols mentioned to a set of variables and their affiliation signified in the logical plan intended to represents, in full or partly, some actual system or process. It is therefore a symbol of reality that makes a clear significant association among aspects (RAJASEKHAR). The relationship between return on assets and return on equity as dependent variables and the independent variables in this research is described using panel data model. Panel data are models that unites cross-section and time-series data. It comprises observations of numerous phenomena found over many time periods for the similar organizations or individuals (Gujarati & Porter, 1999)

Accordingly, in the path of creating relationship between dependent and independent variables with emphasis to separate characteristics of firms, such as industrial sector, firm's year of reports and so on, a panel data well-thought to be a proper tool. This is because panel data can take clear account of individual -details heterogeneity, it is also well in detecting and measuring the effects that cannot be detected in time series and cross-section data. Furthermore, panel data provides better evidence on data analysis by giving more data variation, more degree of freedom and reduces collinearity amongst variables (Hair, Black, Babin, Anderson, & Tatham, 1998).

The following equation developed as the economic model appropriate to examine the correlation between CEO as the only executive board member and firm performance:

$$Y_{it} = a_0 + a_1X1_{it} + a_2X2_{it} + a_3X3_{it} + a_4X4_{it} + a_5X5_{it} + \varepsilon_{it}$$

In the above equation,  $Y_{it}$ ; represents the independent variable of interest (firm performance), the return on assets (ROA) and return on equity (ROE) for cross-section units  $i$  at time  $t$ .

Where;  $i=1, \dots, n$ , and  $t=1, \dots, T$ . and  $X1_{it}$ ,  $X2_{it}$ ,  $X3_{it}$ ,  $X4_{it}$ ,  $t$  and  $X5_{it}$  are explanatory and control variables.  $a_0$ ; represent an individual effect contains set of observable individual or group of particular variables;  $a_1$  is the vector containing the power variables.  $a_2$ ,  $a_3$ ,  $a_4$ , and  $a_5$  are vectors representative of other factors influencing firm performance

that believed to have significant effect on performance. The  $\varepsilon_{it}$  represents the error term and it is presumed to have zero mean and autonomous across periods of time.

This study engages two important ratios (return on assets and return on equity) to measure the performance of the firm in distinct period of time. To adopt the above economic model, the equation involves:

$$Performance = a_0 + a_1CEOBM_{it} + a_2FSIZE_{it} + a_3BSIZE_{it} + a_4BINDE_{it} + a_5BACOM_{it} + a_6CEOYE_{it} + \varepsilon_{it}$$

Where Performance, on the other hand are return on assets (ROA) and return on equity (ROE) for  $i^{th}$  firm at time  $t$ .  $CEOBM_{it}$  is the CEO is a board member for  $i^{th}$  firm at time  $t$ ,  $FSIZE_{it}$  is the Firm size for  $i^{th}$  firm at time  $t$ ,  $BSIZE_{it}$  is the board size for  $i^{th}$  firm at time  $t$ ,  $BINDE_{it}$  is board independence for  $i^{th}$  firm at time  $t$ ,  $BACOM_{it}$  is board audit committee for  $i^{th}$  firm at time  $t$  and  $CEOYE$  is CEO year of experience. Whereby  $a_0$  is the intercept and;  $a_1$ ,  $a_2$ ,  $a_3$ ,  $a_4$ ,  $a_5$ , and  $a_6$ , are regression coefficients; and  $\varepsilon_{it}$  is error term which may signify the effect of variables that are not clearly involved in the model.

### 3.7 Data analysis approach

After gathering of the required data from the dataset, the researcher coded the data by assigning a label to each variable and number for each response category (e.g. 1 for “yes” and 0 for “no”) so as data can be suitable for input into econometrical software called STATA ready for tabulation and analyzing. The researcher of this study uses STATA for data analysis because of its capability to analyze panel data and use of multivariate statistics (Drukker & Gates, 2011), further, presence of sufficient learning sources and the online support makes it expedient for researcher to adopt this econometrical software.

Before the information is tabulated and analyzed and after the same has entered into computer with the assistance of statistical software package STATA, the data is required to be “cleaned”- certifying the data entry was correctly performed with precision to attain accurate analysis. The researcher checked if there is information entered incorrectly or twice and verified against accurate information extracted from the dataset, finally the researcher performed a diagnostic test to explore the presence

of econometric problems for the model in the study. The possible complications arose in the model that needed further check were abnormal distribution of error term and multicollinearity between ROA and ROE. Researcher conducted further tests such as homogeneity, autocorrelation and linearity.

### **3.8 Managing Omitted variables bias**

Omission of relevant variables in the model is sometimes called underfitting the model. For different reasons, researchers may not include relevant independent variable(s) that supposed to be included in the model and consequently, could not capture important issues of the subject under study and this influence the dependent variables. It is for these reasons researchers need to test empirically their models if are adequate by looking broad features of the result from regression. These features are  $R^2$ , adjusted  $R^2$ , the estimated  $t$  ratios and the sign of coefficients in comparison to previous expectations. If  $R^2$  results from regression look too low or very few coefficients that are statistically significant then, the regression model is under fitted (Gujarati & Porter, 1999)

Monitoring for unobserved effects mostly governed by the characteristics of omitted variable if is changing overtime or is constant overtime. There are different methods therefore, to monitor the omitted variables however, the researcher used two of them; fixed effects model and random effects model (Gujarati & Porter, 1999; Wooldridge, 2006)

Fixed effects model is the statistical model where the parameters in the regression are fixed in quantities unlike random effects model where all or some of parameters in the model are thought to be non-constant variable. Fixed effects model holds when the individual specific effects are correlated with independent variables. In other words, constant parameters accounts differences that arise from phenomenon under study. It allows each unobserved/omitted variable across cases to be monitored by associating it with independent variable and hence, assess and account for the independent variable's net effect (Gujarati & Porter, 1999).

The random effect model holds when individual specific effects are not correlated with regressor (independent) variables. From this assumption if it holds, the random

effects estimator is said to be more efficient than fixed effects estimator else, it is said to be inconsistency. Testing the relevance of both fixed and random effects models suitable to this study, researcher relied on Hausman test.

### **3.9 Econometric Analysis**

Researcher conducted a diagnostic check on the econometric problem formulated in this study. In multiple regression, assumptions of linearity, normality, homogeneity of variance, independence and non-multicollinearity are essential diagnostic checks in econometric model. Moreover, the researcher described the descriptive statistics that explains the main features of information collected. Finally, to this section the researcher has conducted the inferential statistics tests such as  $R^2$ , adjusted  $R^2$ , F-test, and t-test generated from STATA to attain properties of good econometric model.

#### **3.9.1. Linearity**

Regression is about studying the association between dependent variable and another one or many other independent variables. This relationship between the independent variables and the outcome variable should be linear. Regression analysis may but not necessarily mean the independent variables are the source and the dependent variable is the effect. Regression creates the so-called least squares regression line which approximates coefficients by minimizing the squared differences between the observed responses from dataset and on the other hand their predictable values. The Ordinary Least Square model (OLS) assumes that data analyzed are properly stated in a sense that, neither relevant variables had been excluded nor irrelevant variable had been included in the model (Greene, 1981). The smaller the sum of squared differences between the observed data and their predicted values the better the model fits the data. Therefore, the linear regression model in this study covers the hypotheses and the conceptual framework that formulated in prior chapter.

Hypothesis H1(a): *Firms with CEO only inside director have influence on return on assets* as it has been shown in below linear equation number 1. And Hypothesis H1(b): *Firms with CEO inside director have influence on return on equity* as shown in equation number 2 below.

Both explains CEO duality and firm financial performance. The following are the linear regression models:

$$ROA_{it} = a_0 + a_1 CEOBM_{it} + a_2 Controls_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (1)$$

$$ROE_{it} = a_0 + a_1 CEOBM_{it} + a_3 Controls_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (2)$$

Where;

$ROA_{it}$  = Return on assets for firm  $i$  at time  $t$ , where  $i=1 \dots n$  and  $t=1 \dots T$

$ROE_{it}$  = Return on equity for firm  $i$  at time  $t$ , where  $i=1 \dots n$  and  $t=1 \dots T$

Controls = control variables (firm size, board size, number of independent directors, CEO year of experience, firm leverage, and audit committee)

$\mu_i$  = Unobserved firm specific heterogeneity effect

$\varepsilon_{it}$  = The individual errors that differ across  $t$  as well as across  $i$

### 3.9.2. Non-multicollinearity

Multicollinearity arises when explanatory variables are highly (but not perfectly) associated in the multiple regression model, as a result these variables are acutely observed as statistically trivial instigating redundancy in the model.

When the explanatory variables are perfectly linear related among each other (perfect collinearity or multicollinearity), researchers cannot obtain all individual estimates of regression coefficients and by so, the researchers fail to conclude any statistical inferences (hypothesis testing) about them individually however, they can find estimates of all linear combined coefficients. In real world the perfect multicollinearity researchers encounter is very rare. The classical linear regression model (CLRM) where near or very high multicollinearity (but not perfect) are mostly exist. The classical linear regression model clarifies the explanatory variables are approximately linear, and the correlated variables can pose problems for the ordinary least squares in multiple econometric regression models. Therefore, in the classical linear regression model (not perfect collinearity), the ordinary least squared estimators continues to be the best linear unbiased estimators even one or more

regression coefficients in the multiple economic model can statistically be individually insignificant (Gujarati & Porter, 1999)

The researcher conducted various diagnostic tests of multicollinearity because no single diagnosis gives conclusive answer about presence or absence of multicollinearity in economic model.

The researcher initially conducted the correlation test amongst independent variables by running correlation analysis using STATA and found all the variables under study are weakly associated. Different scholars view the correlation analysis of 0.9 as the cutoff point that alarms presence or absence of multicollinearity (Bagheri, Midi, & Statistics, 2009). If the association analysis found 0.9 or greater, then there is effect of multicollinearity. Running the correlation of explanatory variables used in the study, the researcher found no very high pairwise among the six explanatory variables found equal or greater than 0.9 henceforth, multicollinearity do not occur.

**Table 3-5: The correlation matrix of independent and control variables**

	(1)	(2)	(3)	(4)	(5)	(6)
<b>(1) CEO Board Member</b>	1.00					
<b>(2) TOTAL ASSETS</b>	(0.01)	1.00				
<b>(3) BOARD SIZE</b>	0.10	0.70	1.00			
<b>(4) No. INDEPENDENT DIRECTORS</b>	0.26	0.22	0.39	1.00		
<b>(5) CEO YEAR OF EXPERIENCE</b>	0.06	0.62	0.79	0.50	1.00	
<b>(6) EXISTENCE OF AUDIT COMMITTEE</b>	(0.10)	0.09	(0.07)	(0.03)	0.04	1.00

Source: Researcher (2020)

Also, multicollinearity problem can be detected using Variation Inflation Factor (VIF) method. The VIF evaluate the impact of association among the explanatory variables in the Ordinary Least Squares estimators. Curto and Pinto (2011), explains that the value of VIF ranges from one to infinity and will show serious multicollinearity problems when VIF is more than 10.0. Also, if the value of VIF for any variable is greater than 5, then we have to consider dropping that variable from

regression model because it has multicollinearity (Gujarati & Porter, 1999). The researcher regressed return on asset and all the independent variables included in the model and further command the VIF test. The result shows the value of each independent variable is less than 5 and therefore, no multicollinearity effect in the regression.

Furthermore, tolerance value is another method to measure multicollinearity problem. The value for tolerance ranges from zero to one. The closer the tolerance value to zero the higher the effect of multicollinearity problem present in the model (Hair, Anderson, Babin, & Black, 2010). Table 3-3 below shows variance of inflation factor and tolerance value.

**Table 3-6: Variance of Inflation Factor (VIF) and Tolerance Value (reciprocal of VIF)**

<b>Variable</b>	<b>VIF</b>	<b>1/VIF= Tolerance Value</b>
Board size	3.52	0.28
Years of CEO experience	3.19	0.31
Total Assets	2.17	0.46
No. Independent directors	1.55	0.64
CEO Board Member	1.17	0.85
Audit committee	1.07	0.94
Mean VIF	2.11	

Source: Researcher (2020)

The researcher finally tested multicollinearity problem using R-squared. If R-squared is greater or equal to 0.9, and there is very high pairwise association among the four explanatory variables used in this study, then problem of multicollinearity may exist. It should be noted that a high R-squared obtained from regression can be a mileage for multicollinearity effect although it may not automatically blow up the standard error and variance of the OLS estimators (Gujarati & Porter, 1999). The below table 4-3 in the next chapter, confirms the there is no effect of multicollinearity problem in

the model after regressing return on assets (ROA) with independent variables included in the model. The result shows 44% of total variations in dependent variable (ROA) are explained by all independent variables. This may be triggered by the use of larger sample size and the practice of using panel data in the study that lowers the effect of multicollinearity problem.

In the situation where we found a near or high multicollinearity, the variance and standard error of ordinary least squared estimators become large when these explanatory variables together are included in economic model thus, become difficulties to predict the true value the OLS and the estimator lose precisions. In addition, because of large standard errors, the confidence intervals for actual population parameters widens. Next, because of high standard errors the t-values become insignificantly small which accelerate the true population coefficient to be zero and draws conclusion to accept the null hypothesis.

Further, consequences of high multicollinearity are that, the  $R^2$  value in the regression become high but the t-value of few regressor variables become significant (p-value <0.05). And hitherto on the F-test, it shows the variables have no effect leading to reject the null hypothesis. Finally, in a multiple regression, high collinearity leads to failure in assessing the contribution of each explanatory variable to the overall coefficient of correlation. This is because, as one explanatory variable change, the other same variable also changes as similar as the first (Hair et al., 1998).

### **3.10. Assumptions of multiple regression analysis.**

Typically, multiple regression analysis assumes the relationship between the response and predictor variables is linear. Next, in multiple regression it assumes the explanatory variables are not perfectly or nearly perfectly correlated, the error terms are normally distributed.

#### **3.10.1. Homogeneity of variance**

Homogeneity of variance (also known as homoscedasticity) means error variance are equal while heteroscedasticity infers unequal variance. Heteroscedasticity therefore is the destruction of assumption of multiple regression where by the OLS estimators

shows best linear unbiased even there is a problem of heteroscedasticity (Gujarati & Porter, 1999).

The researcher applied Breusch-Pagan test which gives acceptance of a null hypothesis if there is homoscedasticity within dependent variables. He must fail to reject the null hypothesis if p-value is  $> 0.05$  (at five percent significant level) because the result test is not significance, and reject the null hypothesis if the p-value result is less than 0.05 ( $p < 0.05$  at five percent significant level) because the result shows statistically significant.

Table 3-4 shows the result test for heteroscedasticity for both ROA and ROE performance determinants. The researcher fails to reject the null hypothesis for ROA as the measure of performance because p-value is greater than 0.05 (is 0.0936) at 5% significant level. By the same token, regressing ROE with independent variables and apply heteroskedasticity test the result shows p-values is 0.1617 greater than 0.05 and therefore, again researcher failed to reject the null hypothesis. This implies CEO inside board member and control variables in the model proved to be statistically insignificant to determine firm performance.

**Table 3-7: Explains the Breusch-Pagan / Cook-Weisberg test for heteroskedasticity**

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROA
chi2(1) = 2.81
Prob > chi2 = 0.0936

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of ROE

chi2(1) = 1.96
Prob > chi2 = 0.1617

Source: Researcher (2020)

### 3.10.2. Normality

In multiple regression, another assumption on the error term must be normally distributed. The normality hypothesis of error term both the ordinary least squared (OLS) and the Maximum Likelihood (ML) methods give similar estimation of coefficients. Since the researcher did not observe the true error of the population, he observed sample error (residuals) to substitutes for true error. Therefore, this study had used the residuals to understand the normality of the population error. According to Gujarati and Porter (1999), the error term is normally distributed in OLS if the sample size is large and have a minimum variance and therefore, regression is said to be the best linear unbiased estimators. Further, according to the central tendency theorem, the error term is more likely to be normally distributed when the number of explanatory variables is large.

Normalizing data is a common test from which a sample extracted from the population should be normally distributed. The researcher did this test to moderate the deviation of some variables from normal through variables transformation to make the symmetry of the distribution look more closely to the normal distribution.

Researcher used Shapiro Wilk for testing normality of error term. If the probability outcome from STATA is greater than 0.05 ( $P > 0.05$ ) then the specific variable is normally distributed then there is always no enough evidence to say the population is not normally distributed therefore, I fail to reject the null hypothesis. On the other hand, if the p-value is less than 0.05 ( $p < 0.05$ ), then I have enough evidence to say the population is not normally distributed and therefore, reject the null hypothesis.

After command the Shapiro Wilk and kernel density-normal probability plot tests for normality in the STATA, researcher found Board size, number of independent directors in the board and CEO year of experience variables are normally distributed however, total assets not normally distributed and need transformation. The transformation of this variable is required and need first to performed ladder

command to see suitable transformation methods. Table 3-5 illustrate Shapiro -Wilk test for normality.

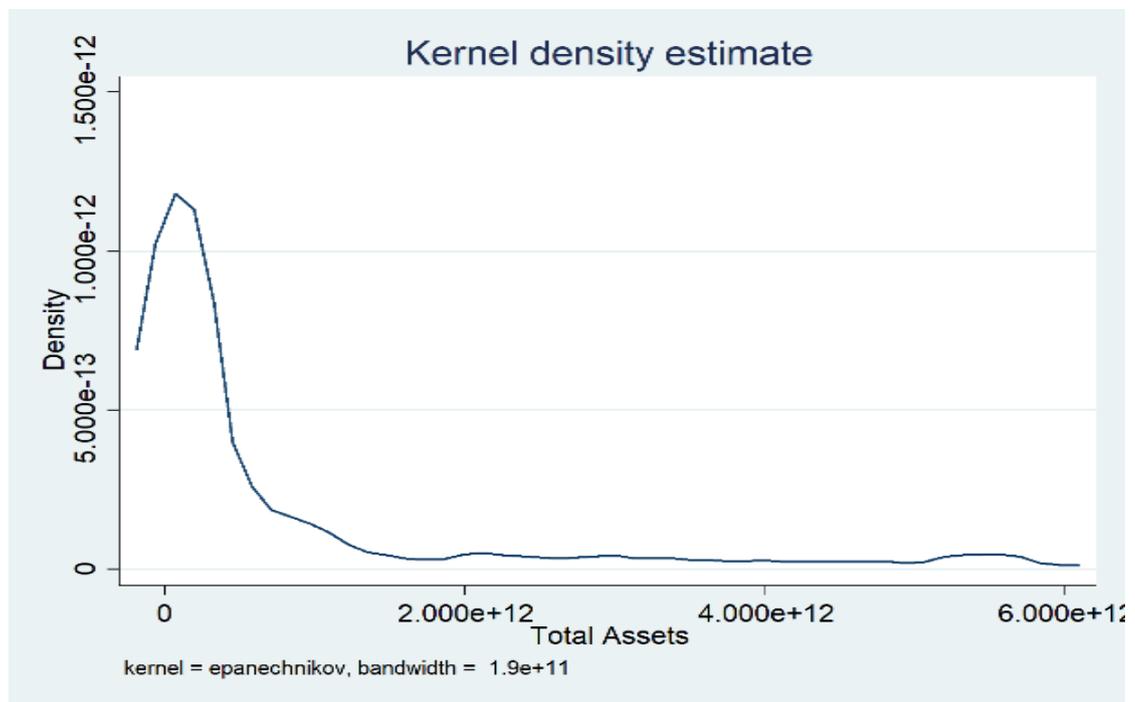
**Table 3-8: Explains Shapiro-Wilk W test for normal data**

Variable	Observation	W	V	z	Prob>z
CEO Board Member	80	0.98	1.40	0.74	0.23
Total Assets	113	0.59	37.48	8.09	0.00

Source: Researcher (2020)

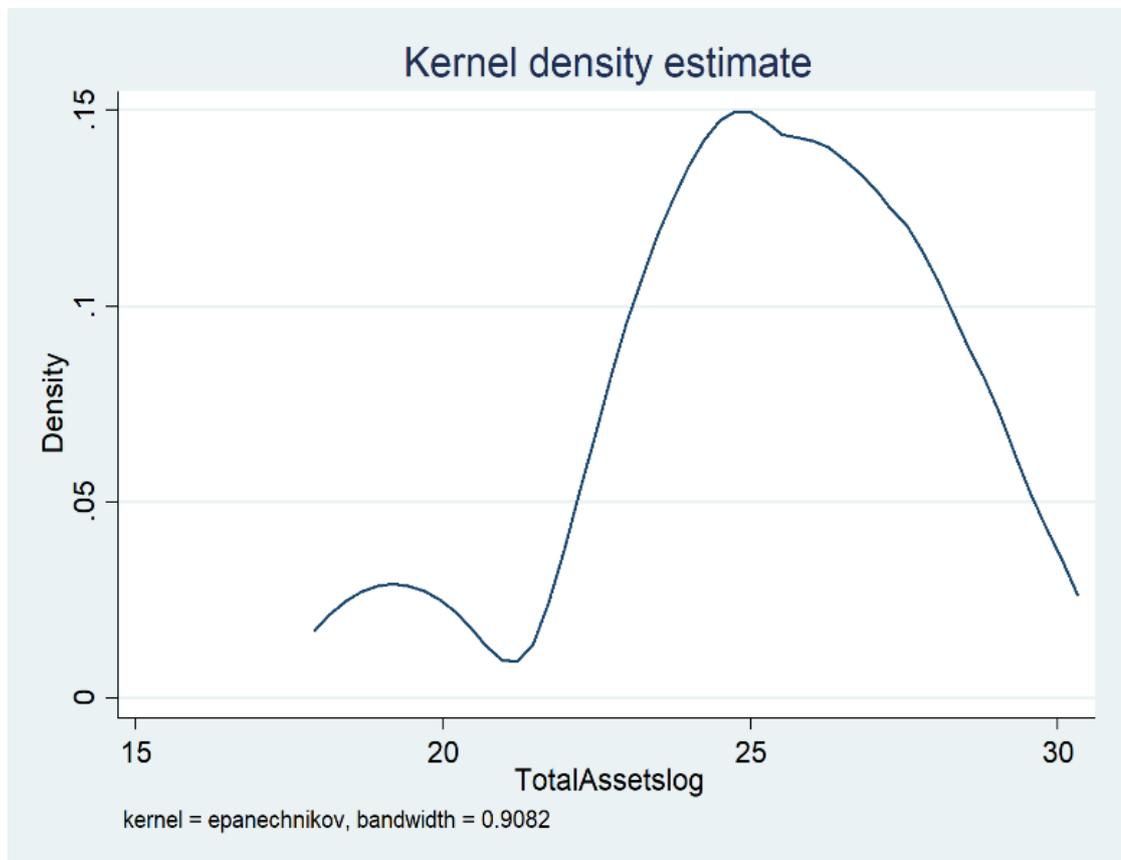
**Figure 3-1: Show transformation of Total assets**

Total assets before transformation



Source: Researcher (2020)

Total assets after transformation



Source: Researcher (2020)

### 3.10.3 Non-autocorrelation

It is assumed in multiple regression analysis that the error terms associated with one observation cannot correlate with error of any observation therefore, autocorrelation occurs when the error terms are correlated. A significant cause of autocorrelation is when there is a missing of some key variable(s) in the regression model. Normally researchers used to test autocorrelation on the observed sample that are neither in time series data nor in cross sectional (Robichek et al., 1966). No autocorrelation means the disturbance connected to an individual observation is not linked with disturbance term connecting any other individual observation.

Consequences of autocorrelation in the model are similar to those of heteroscedasticity whereby the least squares predictors remain linear and unbiased but, not best linear unbiased estimators because the estimators are not efficient in a sense that they lack minimum variance (Gujarati & Porter, 1999). With this caveat,

there are several methods used in detection of autocorrelation problem. Some of these are, Wooldridge test, Breusch Godfrey (BG) test (also LM test), and Durbin alternative test (Schink, Chiu, & analysis, 1966). In this study, the researcher used Durbin alternative test and Breusch Godfrey test to determine the significant  $p < 0.05$  (for a 5 percent significant level). The researcher rejects the null hypothesis if it is statistically significant ( $p < 0.05$  for 5 percent significant level)

### **3.10 Instrumental variable approach**

The prime objective to this study is to examine the effect of CEO inside board member on firm performance however, sometimes firm performance may influence the presence of CEOs in board and have a causal relationship. Such influence of the firm arises because of the size or its financial stability therefore, firm performance and CEO board member be subject to each other. The association of CEO board member to influence performance of the firm and the firm to influence the presence of CEOs in board of directors (causal relationship) creates problem called endogeneity of regressor variables which are the predictor and response variables. The problem created when the Ordinary Least Squares (OLS) for estimating the unknown parameters in a linear regression model, produces unfair and inconsistency approximations (Marra & Radice, 2011)

To overcome this problem, most of econometric literatures suggest the use of Instrumental Variable (IV) approaches so as to get constant estimation when the regressor variables (covariates) are associated with the error term present in the model. This association may occur when: the response variable change, causes change in the value of at least one of the regressor variable, or there are omitted variables that disturb both response and regressor variables, and the regressor variables are subject to non-random measurement error (Bernanke & Boivin, 2003). The researcher therefore, used current assets as the exogenous variable to test the existence of endogeneity amidst CEO board member and firm performance by Wu-Hausman F test and Durbin-Wu-Hausman chi-square approach as per developed regression equation in the above. Table 3-7 show how the test for endogeneity was performed.

**Table 3-9: Testing for endogeneity results**

$ROA_{it} = a_0 + a_1 CEOBM_{it} + a_2 Controls_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (1)$	
Tests of endogeneity	
Ho: variables are exogenous	
Durbin (score) chi2(1)	= 1.57686 (p = 0.2092)
Wu-Hausman F (1,28)	= 1.45127 (p = 0.2384)
$ROE_{it} = a_0 + a_1 CEOBM_{it} + a_3 Controls_{it} + \mu_i + \varepsilon_{it} \dots \dots \dots (2)$	
Tests of endogeneity	
Ho: variables are exogenous	
Durbin (score) chi2(1)	= 1.3625 (p = 0.2431)
Wu-Hausman F (1,27)	= 1.24125 (p = 0.2751)

Source: Researcher (2020)

The condition of endogeneity of variables met when the results of Durbin and Wu-Hausman p-values are less than 5% (P-value < 0.05). In this case the researcher should reject the null hypothesis that says the variables are exogeneity (Drukker, Egger, & Prucha, 2013). From the extract of the tested results above (table 3-9), both measures of performance (ROA and ROE) shows p-values are greater than 0.05 (p>0.05). In this case the null hypotheses that say variables are exogenous is true. And therefore, the researcher fails to reject the null hypothesis.

**3.11 Hausman test**

When panel data are used, the researcher has to choose between two techniques to analyze them, fixed effect and random effect models. These models are used to estimate the relationship between independent variables and dependent variable, in this study the CEO power and firm performance (Nickell, 1981).

Fixed effects model shows the association between predictor and outcome variables present in a particular phenomenon. However, each phenomenon (firm, country, individual) under study has self-characteristics that can or cannot influence the independent variables. Fixed effects consider a thing within the object under study can affect the independent or the outcome variables and thing has to be controlled

(for example, being unified CEO or CEO duality could influence decisions of the board in certain issues). Therefore, fixed effects model eliminates explanatory variables that are time-constant features (which is unique to individual) for the advantage of evaluating the net effect of independent variables present on dependent variable (Torres-Reyna & Statistical Services, 2007).

The random effects model assumes that the error term variation across companies under study, is random and not correlated with the independent variables included in the regression model (the correlation between error term and independent variables is zero) therefore, random effects model is able to estimate coefficients of time-invariant variables (dummy variables) to performance prediction over dependent variables (Laird & Ware, 1982).

The decision whether to use fixed or random effects requires to run Hausman test. The null hypothesis is random effects model which says, “difference in coefficients not systematic” and the alternative hypothesis is fixed effect model that says “difference in coefficients is constant”. This test principally examines whether the individual errors ( $\mu_i$ ) are correlated with predictors. When the result from Hausman test confirms p-value=0.0000, it is an indication of fixed effect model is preferred, otherwise random effect model (Baltagi, Bresson, & Pirotte, 2003). Table 3-10 shows results of Hausman test and table 3-11 shows the choice of the model.

**Table 3-10: Hausman results**

Determinants of performance (ROA)				
	Coefficients		(b-B) sqrt(diag(V_b-V_B))	S.E.
	(b) fe	(B) re		
CEOBoardMe~0	-.1017385	.0225846	-.1243231	.0543181
Board size	-.0049342	.0029895	-.0079237	.007698
NoIndepend~s	.0027056	-.0136515	.0163571	.0033618
Yearsofexp~e	-.0031187	.0039943	-.007113	.0086491
Auditcomte~0	-.1743912	-.0823959	-.0919952	.0309418
Total Assets	2.30e-14	-3.30e-14	5.60e-14	2.56e-14

b = consistent under Ho and Ha; obtained from xtreg  
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 54.48$$

Prob>chi2 = 0.0000

(V\_b-V\_B is not positive definite)

Source: Researcher (2020)

Determinants of performance (ROE)				
	Coefficients			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	S.E.
CEOBoardMe~0	-.0676297	.0109364	-.0785661	.0576209
Board size	-.023111	-.0115811	-.0115299	.0074015
NoIndepend~s	.0026241	-.0047355	.0073595	.0030797
Total Assets	5.41e-15	-8.28e-15	1.37e-14	2.74e-14
Yearsofexp~e	-.0102715	.0010711	-.0113426	.0092408
Auditcomte~0	-.1949451	-.0620001	-.132945	.

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 5.04$$

Prob>chi2 = 0.4113

(V\_b-V\_B is not positive definite)

Source: Researcher (2020)

**Table 3-11: Summary on choice between fixed and random effect models from Hausman results**

Variable	Fixed effects model	Random effects model
Performance (ROA)	√	X
Performance (ROE)	X	√

Source: Researcher (2020)

Key: X = Not preferred

√ = Preferred

The results from the above tables conclude that, the ROA as determinant of firm performance has p-value 0.0000 ( $p < 0.05$ ) at level of 5% significant.

Therefore, we reject the null hypothesis which say “difference in coefficients not systematic” instead, the difference in coefficients between error term and predictors

is constant and analyzed using fixed effect model. While ROE determinant of firm performance has p-value 0.4113 ( $p > 0.05$ ) at level of 5% significant. Consequently, the researcher failed to reject the null hypothesis instead, accepted the null hypothesis that says difference in coefficients between error term and predictors is not systematic and this is analyzed using random effects model.

## CHAPTER FOUR

### DATA ANALYSIS AND FINDINGS

#### 4.0 Introduction

The findings and empirical analysis on relationship between CEO power and firm performance based on above hypotheses are presented in this chapter. The empirical analyses include both random effects model for ROE determinant and fixed effects model for ROA.

#### 4.1 Descriptive statistics

Descriptive statistics helps to present information gathered in an evocative way that allow easier interpretation of data. This allow us to see in mind what the raw data displaying particularly when the information gathered are many. Usually there are two main statistics used to describe information; Measure of central tendency and measure of variation. The first case describes the central position of the frequency distribution for collected information. The frequency distribution basically is when the distribution and patterns of data are organized from lowest to highest. On other hand, the statistics that measures variation summarizes information by describing the average spread of information collected.

**Table 4-1: Descriptive statistics results**

<b>Dependent Variables:</b>	<b>Observation</b>	<b>Mean</b>	<b>Std.Dev.</b>	<b>Min</b>	<b>Max</b>
ROA	113	0.14	0.15	-0.26	0.48
ROE	102	0.06	2.13	-21.16	0.70
<b>Independent Variables:</b>					
CEO board Member	80	0.70	0.46	0	1
<b>Control Variables:</b>					
Total Assets	113	755 m	1,400 m	150 m	5,900 m
Board size	85	7.96	2.46	5	16

Independent board member	57	3.86	3.99	0	13
CEO years of experience	86	3.99	4.45	0	19
Audit committee existence	195	0.43	0.50	0	1

Source: Researcher (2020)

Table 4-1 above shows the descriptive statistics of firms. Result indicates on average, 70% of sampled firms have chief executive officers only attend board meetings as executive directors. This suggests there are more CEOs with board membership than CEOs without board membership. The maximum value indicates firms with CEO who also board member is represented by “1” and the minimum value “0” shows CEO is not board member. Consequently, the standard deviation 0.4611488 shows the lowest fluctuation of firms’ CEO who also seats in board of directors. Next, the average number of independent board members from sample firms approximated to be 4 members (40%). And boards have maximum outside board members of 13 people and others have no independent board members. The number of these members fluctuates to approximately 4 for period range from 2005 to 2017. Next, the board size comprises 5 to 16 members, the average board size for the firms is 8 members and they may fluctuate by 2 people from year 2005 to 2017. From the sampled firms, 43% of firms have audit committee from year 2005 to 2017, while the 57% of the same had no audit committee.

In general, variables used in this study attained reasonable variations however, there are some firms have the highest number of observations and others have lower number. This is because there are missing values from the 15 sampled firms

#### **4.2. Correlation test results**

Table 4-2 below shows the association between CEO power measured as member of governing board and return on assets and return on equity are negatively related. It means if there is CEO who is also board member has negative impact on both return on assets and return on equity. This result has support from Rechner and Dalton (1991) whose findings show negative association between CEO power and firm

performance determined by duality and ROE respectively. Also, Rashid and Control (2010), in Bangladesh found negative association between CEO power and firm ROA.

**Table 4-2: Correlation results**

	<b>CEO BOARD MEMBER</b>	<b>ROA</b>	<b>ROE</b>
<b>CEO BOARD MEMBER</b>	1.00		
<b>ROA</b>	-0.13	1.00	
<b>ROE</b>	-0.22	0.81	1.00

Source: Researcher (2020)

### **4.3 Regression results and data analysis**

It is from this section that analyses the results from regressions on the relationship between CEO power measured by CEO only board member and firm performance determined by both ROA and ROE. Researcher tested the regression model to check fitness of the model by regressing outcome variables with predictor variables and the results presented in table 4-3. He also counted for the preferred methods used to regress ROA and ROE following the performance of Hausman test. Fixed effects (FE) and random effects (RE) models are both used in this study to regress ROA and ROE respectively. Table 4-3, 4-4, and 4-5 presents the regression results as follows:

**Table 4-3: Model fitness results**

Variables	ROA	ROE
	0.03	0.01
CEO Board Member	(0.04)	(0.04)
	0.41	0.84
	-0.02	-0.02
Log total assets	(0.00)	(0.00)
	0.000*	0.000*
	0.00	-0.01
Board size	(0.01)	(0.01)
	0.74	0.61
	-0.01	0.00
Independent Directors	(0.00)	(0.00)
	0.044*	0.90
	0.00	0.00
Year of Experience	(0.00)	(0.00)
	0.70	0.92
	-0.13	-0.09
Audit Committee existence	(0.07)	(0.09)
	0.06	0.34
Cons	0.74	0.84
R-squared	0.51	0.42
Adj R-squared	0.44	0.33
Prob > F	0.00	0.00

Source: Researcher (2020)

*\* indicates  $p < 0.05$ . In each column of ROA and ROE, the first cell indicates the value of coefficient, number in brackets indicates the standard error and last cell indicates p-values.*

The above table 4-3 show the results of OLS from which no relationship between CEO who also the board member and firm performance. Cooper and Schindler (1998) argues that R-squared value is regarded as high if is more than 50%, medium if is more than 35% and regarded low if is 10%.The results of R-squared shows that around 42 and 51 percentage variations of return on asset and return on equity, is

caused by all independent variables (the power and control variables) included in the regression model and the remaining percentage variation is due to unobserved variables.

**Table 4-4: Presents results of regressing ROA using fixed effect model**

<b>Regression: ROA as Dependent Variable</b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std Error</b>	<b>t-statistics</b>	<b>Probability</b>
<b>Regression with control variables:</b>				
Log total assets	-0.02	0.04	-0.51	0.61
Board size	0.01	0.01	0.67	0.51
Independent directors	0.01	0.00	1.37	0.18
CEO year of experience	0.01	0.01	1.30	0.20
Audit committee	-0.14	0.09	-1.56	0.13
Cons	0.65	0.97	0.67	0.51
<b>Regression with power &amp; control variables:</b>				
CEO Board member	-0.06	0.05	-1.23	0.23
Log total assets	-0.01	0.04	-0.26	0.80
Board size	0.00	0.01	0.09	0.93
Independent directors	0.00	0.01	0.37	0.71
CEO year of experience	0.00	0.01	0.44	0.66
Audit committee	-0.14	0.09	-1.63	0.11
Cons	0.54	0.97	0.56	0.58
R-squared	0.04			
Prob > F	0.17			

Source: Researcher (2020)

Table 4-4 above indicates there is no relationship between CEO board member and return on asset. This shows CEO board member has no significant economic impact with return on assets (at 5% level of significance) though has trivial negative relationship. This confirms with  $H_0(a)$  which says “*Firm with CEO only inside director has no relationship with return on assets* therefore, I accept the null hypothesis. The economic impact of this model though is trivial, but it shows ROA decreases by 0.06% when the board structure of a firm has CEO who is the only executive board member.

**Table 4-5: Presents the results of regressing ROE using random effect model**

<b>Regression: ROE as Dependent Variable</b>				
<b>Variables</b>	<b>Coefficient</b>	<b>Std Error</b>	<b>z-statistics</b>	<b>Probability</b>
<b>Regression with control variables:</b>				
Log total assets	-0.02	0.00	-4.17	0.00
Board size	0.00	0.01	-0.50	0.61
Independent directors	0.00	0.00	-0.22	0.83
CEO year of experience	0.00	0.00	0.13	0.90
Audit committee	-0.09	0.09	-0.99	0.32
cons	0.85	0.15	5.85	0.00
<b>Regression with power &amp; control variables:</b>				
CEO Board member	0.01	0.04	0.20	0.84
Log total assets	-0.02	0.00	-4.10	0.00
Board size	-0.01	0.01	-0.51	0.61
Independent directors	0.00	0.00	-0.13	0.89
CEO year of experience	0.00	0.00	0.11	0.92
Audit committee	-0.09	0.09	-0.97	0.33
cons	0.84	0.15	5.59	0.00
Prob > chi2	0.00			
R-squared overall	0.42			

Source: Researcher (2020)

Table 4-5 above presents no relationship between CEO who only sits in board of directors and return on equity. The regression with power and control variables show the coefficient of CEO board member indicates positive signs (0.01) this kind of association is statistically insignificant as p-value is greater than 0.05 (0.84). This also confirms with the second null hypothesis and I accept the null hypothesis  $H_0(b)$  that says “*Firm with CEO only inside director has no association with return on equity*”.

To monitor the effect of omitted variables and the variations between error term and predictor variables on economic model, the researcher used fixed effects and random effects models as requirement when panel data method is operated. These models considered to smash out biases on the ordinary least squared method. To conclude on

the regression results, neither fixed nor random effects model showed the seat of CEO as only board member from executive is statistically significant at 5% level. Therefore, performance of the firm has no association with CEO who is only executive board member.

#### **4.4 Extra regression analysis and robust checks**

Researcher conducted additional regression analysis to see if the results of CEO only insider board member has association with Price Earning Ration (PE-Ratio). This robust check is similar with empirical setting of 186 small publicly traded U.S firms (fewer than 500 employees and less than \$ 20 million in revenue), and the results showed the CEO power has no effect on performance measured in PE-Ratio Daily et al. (1993).

Researcher initially performed endogeneity test to check if predictor and outcome (Price earnings ratio) variables were jointly depending. Testing the endogeneity, the researcher used current assets as the exogenous variable to test the existence of endogeneity. Endogeneity arises after there is an association (correlation) sandwiched between regressor variables and the error term in regression model. To test for endogeneity, I used Wu-Hausman F test and Durbin-Wu-Hausman test to check for. The condition of endogeneity of variables met when the results of Durbin and Wu-Hausman p-values are less than 5% ( $P\text{-value} < 0.05$ ). In this case the researcher should reject the null hypothesis that says the variables are exogeneity instead, accept it (Drukker et al., 2013). From table 4-6 below shows both Durbin (score) chi 2 and Wu-Hausman p-values are greater than 0.05 ( $p > 0.05$ ). Therefore, it is true that the null hypothesis (says variables are exogenous) is accepted on the ground p-value to be greater than 0.05 at 5% significant level.

**Table 4-6: Extra robustness testing for endogeneity results**

PE-RATIO	CEO Board member
Tests of endogeneity	P-Value
Ho: variables are exogenous	
Durbin (score) chi2(1)	0.2928
Wu-Hausman F (1,30)	0.3231

Source: Researcher (2020)

Further, the researcher checked suitable regression method used to regress price earnings ratio under working with panel data. Table 4-7 below presents the results from Hausman test to determine the regression models that is preferred in relation to CEO power. The result shows the use of random effect model regression as the p-value is greater than 0.0000 ( $p < 0.05$ ) at level of 5% significant.

**Table 4-7: Extra robustness Hausman test**

	Coefficients			
	(b) fe	(B) re	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
CEOBoardMe~0	17.93006	8.832944	9.097114	12.86017
Total Assets	-2.35e-12	-1.62e-12	-7.30e-13	5.62e-12
Board size	3.858546	1.859147	1.999399	2.349037
Independent dir	1.072626	.698832	.3737939	.9278149
Years of exper	1.3468	-.5452131	1.892013	1.965718
Audit comm exi	16.26106	8.302034	7.959026	7.183604

b = consistent under Ho and Ha; obtained from xtreg  
 B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic  

$$\chi^2(5) = (b-B)'[(V_b-V_B)^{-1}](b-B)$$

$$= 0.40$$
 Prob>chi2 = 0.9953  
 (V\_b-V\_B is not positive definite)

Source: Researcher (2020)

Following the above tests, researcher run the regression to determine the association between price earnings ratio and CEO only inside director. The results presented under table 4-8 below;

**Table 4-8: Extra robustness regression results**

<b>Variables</b>	<b>PE-Ratio</b>
	9.97
CEO Board Member	(5.75)
	0.08
	0.59
Log total assets	(0.73)
	0.42
	0.71
Board size	(1.59)
	0.65
	0.71
Independent Directors	(0.67)
	0.29
	-0.69
Year of Experience	(0.71)
	0.33
	6.72
Audit Committee existence	(14.66)
	0.65
Cons	-27.93
R-squared	0.11
Prob > F	0.56

Source: Researcher (2020)

*\* indicates  $p < 0.05$ . In column of PE-Ratio, the first cell indicates the value of coefficient, number in brackets indicates the standard error and last cell indicates p-values*

The robust test on table 4-8 confirm no association between CEO inside board member and price earnings ratio at 5% significant level however, the association would have been considered at 10% significant level. This result shows the economic impact on extra robustness regression presents firm that changes board structure for a CEO directorship increases price earnings ratio by 9.96% compared to firm remains with executive directors.

Like other determinants of performance used in this study (ROA and ROE), the researcher found price earnings ratio (PE-Ratio) also presents insignificant economic impact if changes of CEO power occur. This is to conclude that the researcher found no relationship between CEO inside board member and firm performance and therefore, the results from this report is strong.

## **CHAPTER FIVE**

### **DISCUSSION OF THE FINDINGS**

#### **5.1 Introduction**

This chapter debates the outcome generated from data analysis chapter. A board of directors is said to be a mainstay of corporate governance because of the decisions made against firm. A sound and active board improves sound corporate governance otherwise, corporate failure and financial scandals prompt the firm. Different scholars studied on relationship between CEO power and firm performance measured by either CEO duality, CEO founder or CEO only board member and profitability respectively. However, an important question is to identify do we know whether there is substantial outcome to support the power of CEO in relation to firm performance.

#### **5.2 Discussion**

In most case of prevailing literatures on CEO power and firm performance are in setting of publicly listed companies that distillate on profit making (Barker III & Mueller, 2002). The descriptive results from previous chapter shows listed firms are financially stable when measured in terms of return on assets and return on equity. The ROA of sampled firms is 14% and ROE is 6%, this is to say on average, for every Tanzania shilling 100 net profit generated for the years, 14 shillings was profits generated from the use of total assets and for every TZS 100 net profit generated, 6 shillings was profits earned by equity shareholders. A serious inquiry is that, is there a substantial justification backing the fact that, CEO who is only executive director in the board, have significant performance compared to firm with other than a CEO as executive directors.

In previous chapters, I have argued that powers of formulating company strategies, decision making and control of resources are primarily for board of directors however, they are invaded by senior manager in the organization mentioned as the Chief Executive Officer. For example, CEO participates in formulation of strategy and has a crucial role in ensuring these strategies are implemented and delivered. Such interaction of roles makes the likelihood of achieving financial performance to

be lower (agency theory) and high (stewardship theory and resource dependency theory) (Boyd, 1995; Donaldson & Davis, 1991; Fama et al., 1983). The results from this study mirrors the null hypothesis that says firm with CEO only directorship, has no significant performance.

The negative and insignificant results coefficient of CEO board member over return on assets have trivial economic impact and therefore, I cannot infer for the whole listed firms. This is because firm with CEO only executive director of the board has not influence on return on assets therefore, findings conclude no relationship between CEO power and ROA. The results mirror previous literatures concluded by (Arora & Sharma, 2016; Assenga et al., 2018; Daily et al., 1993)

The positive and insignificant results coefficient of CEO board member over return on equity have also trivial economic impact on the ground that a firm that changes the board structure for a CEO to be the only executive board member, its ROE will be approximately affected by 0.01% which is insignificant. This finding has support from Berg et al. (1978) and Baliga, Moyer, and Rao (1996).

The researcher found the only CEO executive director to the board has no influence on firm's performance. The relationship between CEO board member and ROA found to be negative while, positive with ROE.

Boarding to the discussion above, a researcher could ask why CEO only inside board member has trivial economic performance while they know that been involved in strategic decision-making vessel would reduce operational costs such as; travelling cost, accommodation and sitting allowances and therefore, improve profitability. This argument is based on agency cost measured in terms of asset utilization and operating expenses. Wan-Hussin (2009) suggest that, other things being equal, firm with a larger ratio of similar directors on the boards have higher operating expenses.

Researcher has the view that board structure with executive directors beside CEO, said to have higher operational costs but covered when an individual firm decides to choose optimal board structure subject to mechanism placed to control agency cost. Moreover, board are not necessarily hold the firm accountable but rather, is a vessel of exchange of ideas among board members. The board of directors have different

expertise as some of them may be CEOs of other companies and bring what comes on their operations to a firm. This makes the entire board to acquire positive advantages and therefore, create public value which is directly linked with clients and customers.

In 2002, Tanzania issued a corporate governance code that applies to stock listed firms setting the pivotal role of influencing the performance of corporate governance. Corporate governance practices need to be comprehensive by introducing standards of assessing board of directors to improve performance and effectiveness of the boards. The assessment should be performed at individual level of board member and as well as the whole board based on company's specific matters and industry in general.

As declared a middle-country economy, Tanzania continues to suffer from unsophisticated markets whereby investors who meet income and wealth criteria do not hold the sophistication that is desired to assess unregistered securities. The unsophisticated markets allow investors to sale off unregistered financial securities and therefore, lessen the efficiency of capital formation. This also could result into significant loss of welfare for individuals who purchase worst investments. Further, weak regional integration and underdeveloped capital markets block long term saving and efficiency distribution of resources to productive sectors.

## **CHAPTER SIX**

### **SUMMARY, POLICY IMPLICATION, CONCLUSION AND AREAS OF FUTURE STUDIES**

#### **6.1 Introduction**

In line with research questions and objectives of the study, this chapter gives a summary of what was obtained in data analysis chapter. Thus, it presents summary of the study, major conclusion, policy implication and recommendations based on the findings.

#### **6.2 Summary**

The main objective of the study was to examine the relationship between CEO power and firm performance of listed firms in Tanzania. To accomplish this, the detailed specific objectives were expressed; (i) to examine the relationship between CEO power and firm return on asset and (ii) to examine the relationship between CEO power and firm return on equity. The study involved 15 listed firms in Dar es Salaam stock exchanges and the major findings concluded that, there is no relationship between CEO power and firm performance. The results suggest that CEO as the only executive member present in board of directors has no economic influence towards firm performance in publicly listed companies.

Other findings included were board size, firm size, percentage of independent directors, year of CEO experience and existence of audit committee. The result shows firm size (logged by total assets) has negative influence over listed firm return on equity.

Therefore, the separation of CEO directorship functions has no economic impact to corporate governance in the direction of firm performance in public listed companies in Tanzania.

#### **6.3 Theoretical, policy and managerial implications**

The results support the agency theory by arguing that total assets (logged) has a negative economic impact to return on equity. Moreover, other board size, number of independent directors, CEO year of experience and existence of audit committee have no association with firm performance.

The results from this study are useful in many dissimilar ways, mostly with regard to understanding the association of CEO only executive director in the board and firm performance. Absence of economic impact for a firm with CEO who is only board member from the executives highlights the need and importance of corporate governance not to engage on risk associated with powers of executives. Also, the result offers suggestion to Tanzania officials and lawmakers that it is not true all corporate governance practices from developed countries are pertinent in developing economies, some do not and need reform. Firms must implement corporate governance practices based on country's economic, social and political environment to create significant impact on their financial performance.

Even if findings show no association between CEO only insider board member and firm performance, empirical studies still defend the characteristics of CEOs (Barker III & Mueller, 2002) as they perform the control function better by carrying well the inefficient part of management.

#### **6.4 Conclusion**

As part of the efforts to address modern economic challenges, researchers conducted several studies on corporate governance in Tanzania. The descriptive statistic results show on average, 70% of listed firms in Dar es salaam stock exchanges have CEOs who are only executive directors attending board sessions from year 2005 to 2017. The problem to the study was limited works, as most of empirical literatures focused on corporate governance and firm performance. This study explores the relationship between CEO as only insider board member and firm performance.

Regardless of summary statistics show significance percentage of CEOs directorship from inside, the regression results and findings presented confirms no relationship. The conclusion is that, CEOs with only directorship from executive team, does not influence firm return on assets and return on equity for public listed companies in DSE. These results were consistent even after performing a robust test and extra regression analysis.

### **6.5 Areas for future study**

Among important factors in success of corporate governance for public listed firms depends on the qualities of executive team however, the study used one determinant of CEO power. It is researcher's proposal to integrate more characteristics of CEOs to see their impact on firm performance. Further, this study mainly focuses on listed companies whereby a great percentage of companies in Tanzania are not listed in stock exchanges and others are state-owned enterprises. I recommend similar studies for state owned enterprises and non-listed companies be undertaken.

Furthermore, the researcher believes the community will also benefits from the reality conceptualization of corporate governance practices by performing a qualitatively the characteristics CEOs in relation to powers conferred.

The researcher has finally, a great hope with this literature as it creates a new ground of forthcoming research on the topic of CEO power, so that the academic community may develop a full and sound understanding of the instruments functioning at the apex of the established modern company.

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