OWNERSHIP CONCENTRATION AND CORPORATE PERFORMANCE IN EAST AFRICAN COMMUNITY (EAC): THE ROLE OF TECHNICAL EFFICIENCY ON FOREIGN OWNERSHIP AMONG PUBLICLY LISTED COMPANIES

BILALI BASESA JUMANNE

DOCTOR OF PHILOSOPHY

FACULTY OF BUSINESS AND FINANCE
UNIVERSITI TUNKU ABDUL RAHMAN
JANUARY 2018

OWNERSHIP CONCENTRATION AND CORPORATE

PERFORMANCE IN EAST AFRICAN COMMUNITY (EAC): THE

ROLE OF TECHNICAL EFFICIENCY ON FOREIGN OWNERSHIP

AMONG PUBLICLY LISTED COMPANIES

By

BILALI BASESA JUMANNE

Thesis submitted to the Department of Business,

Faculty of Business and Finance,

Universiti Tunku Abdul Rahman,

in partial fulfilment of the requirements for the degree of Doctor of Philosophy
in Finance

January 2018

DEDICATION

To my lovely wife Anna Geoffrey Bilali and my daughter Catherine Bilali

Basesa, who offered unconditional love and support and have always been

there for me. Thank you so much!

ABSTRACT

OWNERSHIP CONCENTRATION AND CORPORATE PERFORMANCE IN EAST AFRICAN COMMUNITY (EAC): THE ROLE OF TECHNICAL EFFICIENCY ON FOREIGN OWNERSHIP AMONG PUBLICLY LISTED COMPANIES

Bilali Basesa Jumanne

The poor protection of minority shareholders among the publicly listed firms in partner states of East African Community (EAC) is associated with ownership concentration owing to a laxity to enforce legal and regulatory frameworks. This study integrates the agency theory and resource dependency theory to examine the role of foreign ownership when interacted with efficiency scores towards protection of minority shareholders in the publicly listed firms in East African Community.

Using the balanced panel data of 58 non-financial publicly listed companies in EAC over the period of 2007-2015, the study measures corporate performance using Tobin's Q, Return on Assets and Return on Equity. The panel unit root tests by Im-Pesaran-Shin and Fisher-ADF are performed and the results show that the data are stationary at first difference. The Pedroni cointegration tests show that variables have long-run relationships. Efficiency scores are

developed using Data Envelopment Analysis technique. Moreover, this study employs the Generalized Method of Moments estimator to overcome endogenous problems for developing consistent and unbiased estimates to circumvent the likelihood of reporting spurious results.

The major finding of this study is that the ownership concentration is negative and statistically significant determinant of corporate performance. This result implies that majority shareholders divert company assets at the expense of minority investors to demonstrate poor corporate performance and poor protection of minority shareholders. Also, monitoring and expropriation behaviour executed by majority shareholders demonstrates the existence of the U-Shaped, namely, the nonlinear relationship between ownership concentration and corporate performance among the listed companies in the partner states of EAC. This result suggests that, interests of all shareholders can be aligned with corporate objectives achieved at higher level of ownership concentration.

Moreover, the positive and significant influence of foreign ownership and the interactive variable on corporate performance suggests that foreign ownership can promote protection of minority shareholders. Furthermore, the results show that at least a threshold of 0.66 of efficiency scores is required for foreign ownership to excite superior corporate performance deliberately for protection of minority shareholders and henceforth poverty reduction.

Acknowledging the importance of minority investors for meticulous capital market developments and economic outcomes on country and company levels, results of this study recommend to the authorities to enforce the ownership structure diversity for efficacy corporate governance practices. Meanwhile, the authorities are urged to build and reinforce quality institutions in their jurisdictions for proper corporate governance practices. The importance of institutions emanates from their ability to stimulate corporate efficiencies and for enhancing spill over benefits of attracting potential FDI inflows henceforth promote growth. Moreover, the authorities are advised to weigh the adoption of minority shareholders watchdog technique from Malaysia which demonstrated success since 2000.

Keywords: Concentration Ownership, Corporate Performance, East African Community, Efficiency Scores, Foreign Ownership, Minority Shareholders.

ACKNOWLEDGEMENT

Pursuing this PhD study has been a truly life-drilling experience for me and it would not have been possible to accomplish without the support and guidance that I received from different individuals and institutions.

First and foremost, I would like to be grateful to the Almighty God for blessing me with amiable health through the whole period of my study.

I owe my deepest gratitude to my supervisors: Prof. Dr. Choong Chee Keong and co-supervisor: Dr. Mahmud Bin Hj Abd Wahab for their support and encouragement. Their incisive technical guidance provided me with a strong impetus to undertake this study. Honestly, Prof. Dr Choong Chee Keong was always meticulously very enthusiastic and sympathetic on various parts of this study. I affirm that; without their guidance and constant feedback, this thesis would hardly have been achievable.

Besides my supervisors, I extend my gratitude to the UTAR community for the moral support. I am indebted to Dr. Chong Yee Lee and Dr Gengeswari a/p Krishnapillai for the methodological classes. My appreciation should also reach to the committees of internal examiners during Proposal Defence (PD) and Work Completion Seminar (WCS) for their insightful comments and inspirations, but also for the hard questions which invited me to widen my thesis from various perspectives. I am also indebted to the UTAR Librarians for their reliable support and assistance regarding the library ties.

This thesis entitled **"OWNERSHIP CONCENTRATION AND CORPORATE PERFORMANCE IN EAST AFRICAN COMMUNITY (EAC): THE ROLE OF TECHNICAL EFFICIENCY ON FOREIGN OWNERSHIP AMONG PUBLICLY LISTED COMPANIES"** was prepared by BILALI BASESA JUMANNE and submitted as partial fulfilment of the requirements for the degree of Doctor of Philosophy in Finance at Universiti Tunku Abdul Rahman.

Approved by:

_____

(Prof. Dr. CHOONG CHEE KEONG)　　　　Date: _____

Professor/Supervisor

Department of Economics

Faculty of Business and Finance

Universiti Tunku Abdul Rahman

_____

(Dr. MAHMUD BIN HJ ABD WAHAB)　　　　Date: _____

Asst. Professor/Co-supervisor

Department of Finance

Faculty of Business and Finance

Universiti Tunku Abdul Rahman

SUBMISSION SHEET

FACULTY OF BUSINESS AND FINANCE

UNIVERSITI TUNKU ABDUL RAHMAN

Date: _____

SUBMISSION OF THESIS

It is hereby certified that **Bilali Basesa Jumanne** (**ID No: 15ABD01268**) has completed this thesis entitled **"OWNERSHIP CONCENTRATION AND CORPORATE PERFORMANCE IN EAST AFRICAN COMMUNITY (EAC): THE ROLE OF TECHNICAL EFFICIENCY ON FOREIGN OWNERSHIP AMONG PUBLICLY LISTED COMPANIES"** under the supervision of Professor Dr. Choong Chee Keong from the Department of Economics, Faculty of Business and Finance, and Asst. Professor Dr. Mahmud Bin Hj Abd Wahab from the Department of Finance, Faculty of Business and Finance.

I understand that the University will upload softcopy of my thesis in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,

_____
(BILALI BASESA JUMANNE)

DECLARATION

I, BILALI BASESA JUMANNE, hereby declare that this thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

_____

(BILALI BASESA JUMANNE)

Date _____

TABLE OF CONTENTS

Page

CHAPTER

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ACP   African Caribbean and Pacific

AfDB   African Development Bank

ADF   African Development Fund

AEC   African Economic Community

ASEAN   Association of Southeast Asian Nations

CEN – SAD   Community of Sahel – Saharan States

CEMAC   Communauté Économique des États d'Afrique Centrale

CMA   Capital Market Authority

COMESA   Common Market for Eastern and Southern Africa

CRS   Constant Return to Scale

DEA   Data Envelopment Analysis

DMU   Decision Making Unit

EAC   East African Community

EACCG   East African Community corporate governance

EASRA   East Africa Security Regulatory Authority

ECA   Economic Commission for Africa

ECCAS   Economic Community of Central African States

ECOWAS   Economic Community of West African States

FDI   Foreign Direct Investment

FEM   Fixed Effect Model

GDP   Gross Domestic Product

GMM   Generalised Method of Moments

IGAD   Inter-Governmental Authority on Development

IMF	International Monetary Fund
IPS	Im, Pesaran and Shin
IV	Instrumental Variable
LLC	Levin, Lin and Chu
LSDV	Least Square Dummy Variable
MSWG	Minority Shareholders Watchdogs Group
NDV	National Development Visions
NSE	Nairobi Security Exchanges
OECD	Organisation for Economic Cooperation and Development
ODA	Official Development Assistances
OLS	Ordinary Least Square
POLS	Pooled Ordinary Least Square
PTAs	Preferential Trade Agreements
REM	Random Effect Model
RDT	Resource Dependency Theory
ROA	Return on Asset
ROE	Return on Equity
SADC	Southern Africa Development Community
SSA	Sub-Saharan Africa
2SLS	Two Stage Least Square
UNCTAD	United Nations Conference on Trade and Development
VRS	Variable Return to Scale

CHAPTER 1

INTRODUCTION

1.1   Introduction

The East African Community (EAC) is the regional integration of five partner states, namely: the United Republic of Tanzania, Republic of Kenya, Republic of Uganda, Republic of Rwanda and Republic of Burundi. The EAC was established in 2000 by three mother countries Tanzania, Kenya and Uganda, and thereafter joined by Rwanda and Burundi in 2007. The region shelters an area of approximately 1,818 thousand square Kilometres. The population growth is about 2.3 per cent per annum thus, about 237 million people are expected in the year 2030 (EAC, 2011, 2015b). In 2015, the Community had a population of approximately 149 million people (EAC, 2016).

The partner states of EAC are categorised as low income economies with the exception of Kenya which was classified as lower-middle-income economy by the World Bank in 2016. The EAC aims at deepening intra-regional trade that requires a stable and competitive business environment to achieve value added products, trade and investment by year 2020. Moreover, the region strives to harmonise the achievability of the National Development Visions (NDVs) for each partner state. Accordingly, the objectives of EAC need be reflected into the economic growth of each partner state (EAC, 2015a).

Premised on the above understanding, Tanzania expects to achieve its NDV in the year 2025 with high quality livelihood, good governance through the rule of law, and developed strong and competitive economy. Kenya expects to achieve its NDV in the year 2030 with expectations of providing high quality life to Kenyans. Uganda's NDV will be attained in the year 2040 with prospects of transforming peasant society to modern and accelerated socio-economic society. Rwanda expects to attain its NDV in the year 2020 by achieving the middle income economy status.

In order to achieve the desired objectives and capture global competitive environment, the partner states of EAC, among other things, need to employ and implement quality institutions that are amiably for business ethics. In addition, the partner states have to build sound and functioning public and private sector partnership for efficacy corporate governance practices that will essentially invite potential domestic and foreign investors (AfDB, 2011; EAC, 2011).

This study focuses on the efficacy of corporate governance towards corporate performance of 58 non-financial listed firms in EAC. It is worth to note that, the EAC region will achieve the predetermined goals through proper conduct of corporate governance practices. Besides, the proper conduct of corporate governance practices among the listed companies in partner states constitutes friendly tools for attracting potential investments. Thus, effective corporate governance practices are the bridges for protection of minority investors and impact the capital market developments and economic outcomes on country

and company levels. The enrichment of corporate performance demonstrates the catching-up of the country's growth.

1.1.1 The Corporate Governance in East African Community

There is a growing concern that encompasses the importance of protection of minority shareholders toward financial market developments and economic outcomes at country and company levels. Majority of the publicly listed companies in developing countries including the EAC, - are characterised by ownership concentration where principal-principal problems are dominant. This conflict of interests occurs because majority shareholders expropriate company assets at the expenses of minority shareholders and thus, weakens firm performance (Melyoki, 2005; Yartey & Adjasi, 2007; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008).

The growing importance of corporate governance has been stimulated by factors including but not limited to the scandals plagued Enron 2001, WorldCom 2002, HealthSouth 2003, American International Group 2005, Lehman Brothers 2008, Parmalat the Italy's Enron 2003 and the East Asian crisis 1997 (Fulgence, 2014a; Hawley, 2011; Idowu & Çaliyurt, 2014; Johnson, Boone, Breach, & Friedman, 2000). These crises engineered the collapse of many companies because of the laxity to implement proper corporate governance practices. Johnson, Boone, et al. (2000) opined that the 1997 East Asian financial crisis was contributed by improper corporate governance practices that deteriorated the stock markets.

In Africa, the global financial crisis brought negative effects among the Sub-Saharan Africa (SSA) including the partner states of EAC. These effects inflicted the uneven economic growth among the SSA countries from about 6.5% to about 1% in 2009 before rebounding to 4% in 2010 (IMF, 2009). Moreover, the consequences for declining Foreign Direct Investment (FDI) by 15% in 2008 worsened together the private sector financing and the flow of Official Development Assistances (ODA) (Allen & Giovannetti, 2011; Das & Dutta, 2013; Kumar & Singh, 2013; United Nations, 2009).

Along with the crisis, the consequences for poor corporate governance practices awakened the developing countries including the partner states of EAC to gauge efforts for standard corporate governance practices. On the awake of this fatigue, the partner states of EAC incorporated codes from different jurisdictions including the Organisation for Economic Cooperation and Development (OECD), United Kingdom, Malaysia and South Africa. This attempt intended to empower the East Africa Security Regulatory Authority (EASRA) for strong Capital Markets Authorities (CMA) in the region. In general, this action steered the building of solid guidelines for good corporate governance practices in public listed companies and to the issuers of debts for effective corporate performance (EAC, 2011).

Thus, the adapted standard corporate governance practices in Africa including the partner states of EAC intended to awaken the stagnant growth that was delayed by unstable politics, corruption, bureaucracy and weak legal systems. It is important to note that weak corporate governance practices deter making

4

potential investment decisions in emerging markets (Khanna & Zyla, 2010; Munisi, Hermes, & Randøy, 2014; Rwegasira, 2000).

Since the pervasiveness for the laxity to enforce legal and regulatory environments among partner states of EAC implies underdeveloped external mechanisms of corporate governance, a need to have well-functioning external and internal mechanisms that promote the efficacy corporate governance practices was necessary. The external mechanism constitutes the legal and regulatory systems for impacting markets for corporate control and takeovers, whereas,- the internal mechanism of corporate governance constitutes an alternative means for protection of minority shareholders (Dyck, 2001; La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2002; Young et al., 2008).

The publicly listed companies among partner states of EAC are dominated by ownership concentration; an outcome of poor legal and regulatory framework and lack of market for corporate control (Klapper & Love, 2004b; Luo, Wan, & Cai, 2012). The lack of market for corporate control does not create threat for hostile takeover for inefficient management because voting power is diluted (Becht & Boehmer, 2003; Mayer, 2002). As a result, such weaknesses deliberate the ownership and control of the company into the hands of majority shareholders who are driven by incentives of private benefit of control to extract company resources. The expropriation by majority shareholders creates horizontal problem which in turn worsens the corporate performance (Chakra & Kaddoura, 2015; La Porta et al., 2002; Young et al., 2008). Studies have indicated that concentrated ownership stands at 65% in

Tanzania[1] (Nyaki, 2013), 64% in Kenya[2] (Mule, Mukras, & Oginda, 2013), and above 50% in Uganda[3] and Rwanda[4].

The financial liberalisation that took place in 1990s towards market development lessened barriers for international trade and initiated foreign investors to easily access international markets. It is widely accepted that foreign investors facilitate standard corporate governance practices and enhances performance of targeted companies (Aggarwal, Erel, Ferreira, & Matos, 2011; Douma, George, & Kabir, 2006; Gillan & Starks, 2003). Moreover, foreign investors from developed economies where investor protection is very strong, they exercise investor protection in targeted companies that are located in weaker investor protection regions (Chakra & Kaddoura, 2015).

It is acknowledged that countries that build stable and favourable business environment attract potential foreign investors (Aggarwal et al., 2011). However, this attempt requires each country to enforce the implementation of friendly reforms that will attract potential investors. The regulatory business environment facilitates foreign investors to transact at lower costs and eases the cost of doing business (Gaur, Kumar, & Singh, 2014; Yang, 2015). The laxity to implement institutional reforms among the SSA including the partner states of EAC is of paramount to investigate (Rossouw, 2005). Recent study carried by Barasa, Knoben, Vermeulen, Kimuyu, and Kinyanjui (2017)

---

[1] Dar Es Salaam Stock Exchange (DSE)
[2] Nairobi Stock Exchange (NSE)
[3] Uganda Security Exchange (USE)
[4] Rwanda Security Exchange (RSE)

concluded on the prevalence of weak institutions among the partner states of EAC Kenya, Tanzania and Uganda. The authors argued that institutions in Tanzania are much weaker compared to other partner states. It is significant to note that, - Rwanda has been consistently appreciated for efforts undertaken so far to reform their institutions (World Economic Forum, 2015).

Therefore, institutions that comprises with formal and informal economic, social and political perspectives, are expected to foster social interactions by pioneering pleasant policies necessarily for improved corporate performance. Institutions are accredited for playing significant roles of facilitating human interaction and thus promote productivity through investments (Bénassy-Quéré, Coupet, & Mayer, 2007; Buchanan, Le, & Rishi, 2012; Hodgson, 2006; North, 1990). This implies that pleasant environment minimises fears and boosts confidence to foreign investors on their investments. However, it is worth to note that,- the partner states of EAC have yet to attract potential foreign investors because of laxity to enforce amiable business environment (Eyster, 2014; Okpara, 2011).

Kenya is viewed as an icon for economic landscaping among East African countries and it is among of the countries that established their stock market as earlier as in 1954. However, being long existed in the market, Kenya has not yet attracted significant number of foreign ownership among listed firms at Nairobi Securities Exchange (NSE) as reported in Table 1.1.

Table 1.1: Trends in Investor Holding at the NSE

Type of Ownership/Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
East African Institutions (%)	54.5	77.2	74.2	73.6	68.3	66.7	47.6	65.4	46.9
East African Individuals (%)	26.9	14.9	15.7	13.8	12.2	12.0	23.7	13.0	18.9
Foreign Ownership (%)	18.6	7.9	10.1	12.6	19.4	21.3	27. 9	21.6	26.4

Source: Capital Market Authority of Kenya - Capital Markets Bulletin (2015).

Table 1.1 highlights the trend of three categories of investors available at Nairobi Security Exchanges (NSE) namely the East African Institutions, the East African individuals and foreign investors. Clearly, the trend shows an increasing albeit the small number of foreign investors among listed companies at NSE. Therefore, this study intends also to examine the role of efficiencies that are created by institutions to stimulate foreign ownership towards superior firm performance which in turn promotes the protection of minority shareholders among publicly listed companies in partner states of EAC.

There are vast empirical studies that have been carried out on the ownership concentration and corporate performance relations. More studies were conducted in developed economies than emerging economies including EAC which has dearth empirical studies. The corporate governance practices in developed economies are built on solid and well established institutional systems where management activities are monitored at low costs (Bajaj, Chan, & Dasgupta, 1998; Iskander & Chamlou, 2000).

Meanwhile, in developing economies including the partner states of EAC, the ownership concentration and firm performance relations has not received yet

sufficient attention. The partner states are characterised by weak legal and regulatory outlines which accelerates high level of managerial discretion and higher agency costs (Goergen & Renneboog, 2001; Wright, Filatotchev, Hoskisson, & Peng, 2005; Young et al., 2008).

There are scarce empirical studies which were carried out among partner states in EAC. A few studies that are available examine either the determinants of corporate governance or the ownership structure and corporate performance relations. For instance, studies conducted by Fulgence (2013); Melyoki (2005) examined the determinants of corporate governance whereas studies carried by Mule et al. (2013); Ongore (2011) examined the concentration ownership and firm performance relations. Mule et al. (2013) using 53 listed firms at NSE in Kenya over 2007-2011 reported significant negative ownership concentration and performance relations.

Thus, the studies that examined relationship between ownership concentration and performance reported mixed results. However, these studies hardly gave sufficient attention to examine the monitoring and controlling behaviour of majority shareholders which are tools for poor protection of minority shareholder in EAC. Moreover, results from these studies could have been influenced by ignoring the endogenous problems which are caused by unobserved heterogeneity. The current study accounts for endogenous problems by employing the GMM estimator. To address the monitoring and expropriation effect towards protection of minority shareholders, the study

examines the existence of the nonlinear relationship between ownership concentration and corporate performance.

Additionally, previous studies have not provided adequate attention on the stimulating ability of efficiency on the relationship between foreign ownership and corporate performance towards the protection of minority shareholders. Hence, this study employs Data Envelopment Analysis (DEA) technique to develop efficiency scores which are incorporated in the relationship between ownership concentration and corporate performance model to evaluate the efficiency of foreign ownership towards corporate performance. The study measures corporate performance[5] using Tobin's Q, Return on Asset (ROA) and Return on Equity (ROE).

1.1.2   The Consequences for Weak Corporate Governance in EAC

The extent of weak corporate governance in the region varies among partner states for a number of reasons including but not limited to social, economic and nature of individual country. However, the costs for weak corporate governance practices impact the achievability of the standard and quality of life described in the NDVs of each partner state. Therefore, the reasons for weak corporate governance practices in East African countries include the following.

---

[5] Corporate performance measures are detailed in chapter three

First, weak legal and institutional platforms among listed firms in developing countries including the EAC are hampered by imperfect contracts, unstable share price, low market capitalisation, frequent technology changes, principal-principal conflicts, low dividend pay-outs, minimal investment in innovation, flux and unstable macroeconomic factors, deficient monitoring mechanisms, disputable managerial discretion and agency costs (Goergen & Renneboog, 2001; Wright, Filatotchev, Hoskisson, & Peng, 2005; Young et al., 2008).

The wide acknowledged fact is that stock markets are of paramount for boosting the economic growth because of their ability to diffuse information, mobilise savings and facilitate investments (Arestis, Demetriades, & Luintel, 2001; Oriwo, 2012). However, the partner states of EAC are characterised by fewer listed companies in their respective stock exchange. Until 2015, the four exchanges of EAC had 110 listed companies. This implies that, listed companies constitute low market capitalisation. Table 1.2 details the markets development in EAC.

Table 1.2: Listed Companies and Stock Market Development in EAC

	Country	Year of Liberalisation	Establishment of Stock Markets	Listed Companies 2015	Market Capitalisation 2015
1	Tanzania	1995	1996	21	US$9bn
2	Kenya	1993	1954	66	US$19bn
3	Uganda	1988	1996	18	US$7bn
4	Rwanda	1996	2005	06	US$3bn
5	Burundi[6]	1999	---	---	---

Source: WB and WTO (2008) and EAC database

---

[6] Burundi has no yet established the stock market.

The stock markets are supposed to be vehicles for strengthening the likelihood for the listed firms to adhere towards standard corporate governance practices which in turn promotes corporate performance (OECD, 2014). Additionally, Claessens and Yurtoglu, (2012); Demb and Neubauer, (1992); Keasey, Thompson, and Mike (2005) asserted that capital market helps firm to expand investments, speed up growth and increase employment opportunities while weak corporate governance reduces investors' confidence and discourage investments from potential investors.

Second, the Doing Business which is the service of World Bank affirms on higher costs of doing business in EAC (World Bank, 2013, 2014b). Cooksey (2011) pointed out that doing business in Tanzania is very expensive because of complex processes and many taxes. Similarly, the report of the World Bank pointed out that the process of doing business in Tanzania is loaded with copious and complex taxes that attract mask bribe (World Bank, 2009). Table 1.3 is a snapshot for the ease of doing business rankings among East African economies for the period of 2007-2015. Note that, the lower the ranking the better ease for doing business.

Table 1.3: Global Ranking for Ease of Doing Business in EAC

Market	2007	2008	2009	2010	2011	2012	2013	2014	2015
Kenya	83	72	82	95	98	109	121	129	136
Rwanda	158	150	139	67	58	45	52	32	46
Tanzania	142	130	127	131	128	127	134	145	131
Uganda	107	118	111	112	122	123	120	132	150
EAC - Average				116	117	115	117	116	123
Total Economies	**175**	**178**	**181**	**183**	**183**	**183**	**185**	**189**	**189**

Source: Doing Business database

In general, the ease for doing business among partner states in EAC is loaded with hostile environment which hinders investors and smooth operations of firms. As highlighted in Table 1.3, the ease for doing business commences at the time of starting a business, getting a construction permit, getting electricity, property registration, getting credit, investors protection, paying taxes, cross border trading, enforcing contracts to resolve insolvency (Chakra & Kaddoura, 2015).

Third, weak corporate governance practices accelerate worsening of potential Foreign Direct Investment (FDI) and thus, deter the possibility to access private external funding. This means that weak corporate governance is hostile for potential foreign investors who are willing to make investment decisions. It is argued that FDI inflows chase healthy institutions as institutions are robust source of FDI (Ali, Fiess, & MacDonald, 2010; Bevan, Estrin, & Meyer, 2004).

The reality about the partner states of EAC is that, the trend of FDI inflows has been increasing albeit decreasing rate (AfDB, 2011; Blomström & Kokko, 1997; Eyster, 2014). The laxity to enforce standard corporate governance practices among partner states embrace hostile environment for potential foreign investors. Lack of transparency, accountability and endemic corruption in Sub-Saharan Africa including the partner states of EAC are among severe barriers toward potential FDI inflows (Rubakula, 2014).

Existing data show that, the trend of FDI inflows among the partner states over the period of 2005-2015 were increasing at discount rate as displayed in Fig. 1.1.
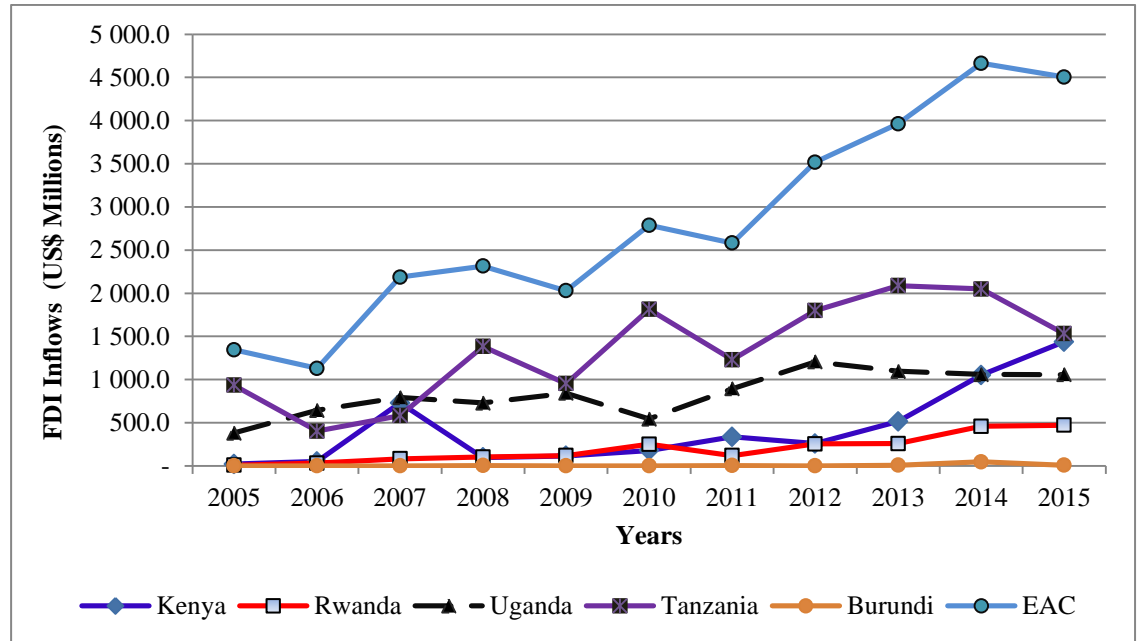
Figure 1.1: Trend of FDI Inflows in EAC from 2005-2015
Source: UNCTAD (2016)

The trend of FDI inflows as disclosed in Figure 1.1 indicates that the EAC has never been the best destination for FDI inflows. Asiedu (2006) opined that, the non-rich resource countries have possibility to attracting potential FDI inflows through implementing standard institutions and good governance (Buchanan et al., 2012). However, the listed companies among the SSA including the partner states of EAC are laxity to implement pleasant business environment. For justification, Figure 1.2 unveils the trend of FDI inflows to EAC and other regions over a period 2005-2013.

14
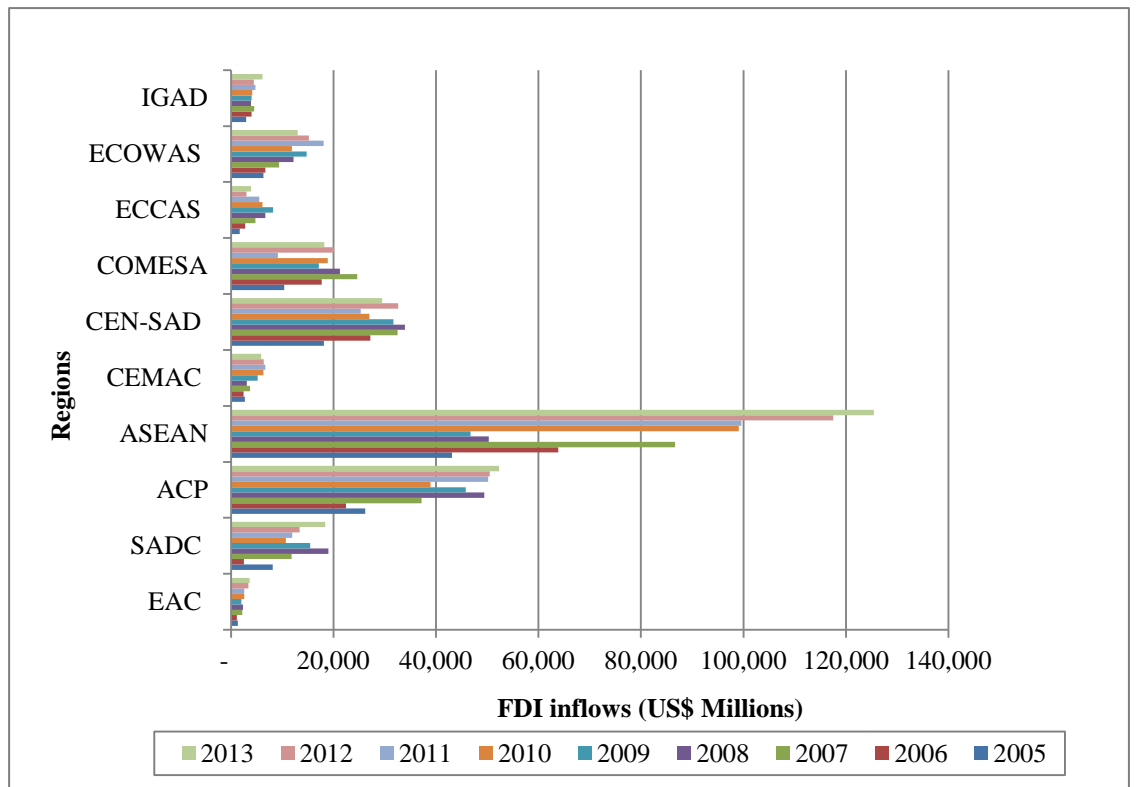
Figure 1.2: Trend of FDI Inflows to Various Regions from 2005-2013
Source: UNCTAD (2014).

Fig. 1.2 shows that FDI inflows in EAC were relatively very low compared to other regions over the period of 2005-2013. Among the stated reasons for low FDI inflows in EAC include weak corporate governance practices. Ayandele and Emmanuel (2013) claimed that good corporate governance practices facilitate the access to external financing, minimise the cost of capital, promotes productivity and enhances low risk of systematic financial failure. Figures 1.1 and 1.2 indicate that the partner states of EAC have had limited initiatives to attract potential FDI inflows because of improper corporate governance practices (Blomström & Kokko, 1997; UNCTAD, 2016).

The pitfalls outlined above result due to a laxity to implement legal and regulatory frameworks. This unrest entails the ownership and controlling

15

rights of the company into the hands of majority shareholders. Thus, separation of ownership and control as predicted by the Agency Theory is violated. As pointed above, majority shareholders extract company assets at the expenses of the minority investors resulting into horizontal problems which in turn creates poor protection of minority investors and poor corporate performance among the partner states (Chakra & Kaddoura, 2015; Filatotchev, Wright, Uhlenbruck, Tihanyi, & Hoskisson, 2003; Wright et al., 2005; Young et al., 2008).

The Global Competitive Index and the Doing Business separately reported the degree of poor protection of minority shareholders in SSA including the EAC. To emphasise on this, the EAC was ranked with low score for strength of minority shareholders protection compared to other regions in 2015. Table 1.4 shows the protection of minority shareholders across regions.

Table 1.4: Protection of Minority Shareholders (0 – poor, 10 – strong)

Region	Extent of conflict of interest regulation index (average: 0-10)	Extent of Shareholder governance index (0-10)	Strength of minority investor protection index (average: 0-10)
OECD high-income	6.4	6.2	6.3
Europe & Central Asia	6.0	5.9	5.9
South Asia	5.2	5.3	5.3
East Asia & Pacific	5.5	4.5	5.0
Middle East & North Africa	4.8	4.6	4.7
Latin America & Caribbean	5.1	4.1	4.6
Sub-Saharan Africa	4.8	4.4	4.6

Source: Doing Business Database.

Table 1.4 shows that the higher income economies implement legal and regulatory reforms, the market for corporate control and takeover are active.

This implies that higher income economies are attached with standard corporate governance practices that are friendly for investor protection. On the other hand, the weak corporate governance practices among partner states of EAC obstruct protection of minority shareholders. The trend for protection of minority investors among the partner states of EAC is disclosed in Table 1.5. The lower score implies the extent of protection of minority investors.

Table 1.5: Extent of Protections of Minority shareholders in EAC

Country	2010	2011	2012	2013	2014	2015
Kenya	100	78	87	82	60	61
Tanzania	91	99	94	110	106	104
Uganda	86	91	97	117	123	106
Rwanda	42	36	30	31	62	25
Total countries	**139**	**142**	**144**	**148**	**144**	**140**

Source: Global Competitive Index Database

Table 1.5 reveals the pervasiveness of weak protection of minority investors among the partner states of EAC. The private benefits of control as pointed out earlier, are the incentives for expropriation by majority shareholders at the expense of minority investors (Claessens & Yurtoglu, 2012, 2013; La Porta et al., 2000a; World Bank, 2013, 2014b). However, Table 1.5 indicates that Rwanda has progressively improved on protection of minority shareholders compared to other partner states. This is to say that Rwanda has undertaken meticulous actions to enforce regulatory framework.

Despite the fact that Rwanda faces similar challenges as those faced by other stock markets in EAC like illiquid and volatility, she intends to provide strong investor protection through regional integration by furthering integration into

17

international capital markets and promoting communication structure (Kazarwa, 2015). Nevertheless, Rwanda is argued to have complex taxes on goods and services which is constraining for potential foreign investors.

Another factor for weak protection of minority shareholders is when security exchanges fail to prioritise between listed and non-listed companies. Figure 1.3 discloses the consequences when stock market provides similar treatment to minority shareholders of listed and non-listed companies.
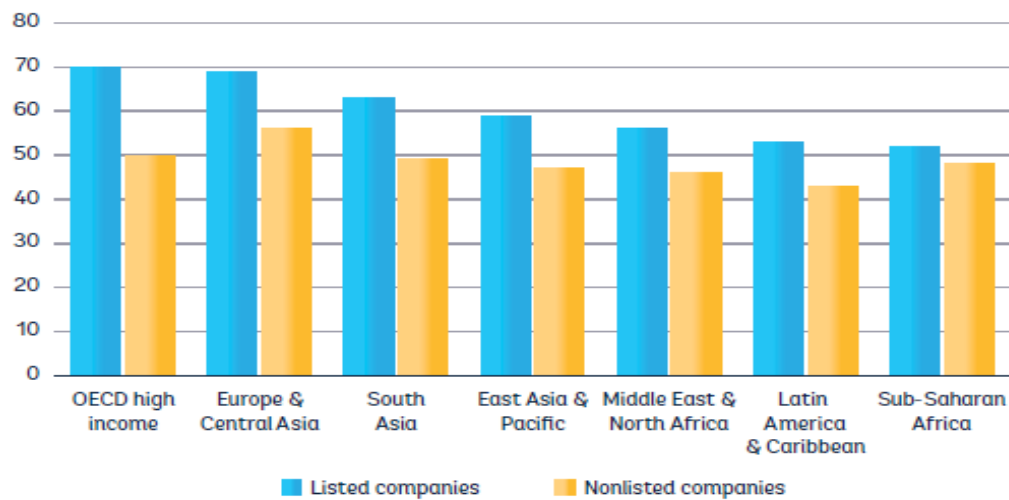
Fig 1.3: Protection of Minority Shareholders for Listed and Non-listed Firms. *Source:* Doing Business database.

The above Figure reveals that there is higher protection of minority shareholders in economies that distinguish between listed and non-listed companies. However, the opposite is true for economies like partner states of EAC that do not distinguish the same. According to Doing Business, the highly regulated markets provide high protection of minority shareholders for listed than for non-listed companies contrary to the Sub-Saharan economies including EAC where minority shareholders for listed and non-listed companies receive the same treatment (Chakra & Kaddoura, 2015).

1.2   Problem Statement

The poor corporate governance among the partner states of EAC is associated with unforced legal and regulatory frameworks (Mak & Kusnadi, 2005; Munisi et al., 2014; Munisi & Randøy, 2013; Rwegasira, 2000; Transparency International, 2017). The laxity to enforce efficacy corporate governance leads into poor protection of minority shareholders and consequently into poor corporate performance among listed companies of member states of EAC.

The separation between ownership and control of companies in EAC is exploited by majority shareholders who expropriate company assets at the expense of minority shareholders. The expropriation by majority shareholders creates horizontal problem which is the conflict between majority and minority shareholders known as principal - principal conflict. The poor protection of minority shareholders is among the key factors constraining firm performance in EAC. The prevalence of poor protection creates uncertainties and pessimism for potential investors who would otherwise undertake potential investments (Munisi & Randøy, 2013; Young et al., 2008).

The legal and regulatory frameworks for developed countries are well enforced whereas the ownership concentration are associated with superior corporate performance because of the concentrated monitoring by majority shareholders (Berle & Means, 1933; Claessens & Djankov, 1999). The underdeveloped legal and regulatory frameworks and markets for corporate control in developing countries including EAC fuels concentrated ownership

into poor protection and poor performance (Filatotchev et al., 2003; Jiang & Peng, 2011; Young et al., 2008). Thus, expropriation by majority shareholders at the expense of minority shareholders perpetuates the poor protection and weakens stock market development and threatens the survival of companies (Kaufmann, Kraay, & Mastruzzi, 2009).

The FDI inflows offer numerous advantages to the host country including the technological transfer, job creation, human skills, management know-how, access of external markets, innovation, and enhance domestic firms (Keong, 2007). FDI inflows among the partner states of EAC have been increasing at decreasing rate. The poor protection of minority shareholders sends bad signal to foreign investors who hesitate to make investments in the region (Claessens et al., 1999; La Porta et al., 1999, 1997, 2000; Maher & Andersson, 1999).

It is acknowledged that institutions play significant role of exciting country's economic growth (Acemoglu, Johnson, Robinson & Thaicharoen, 2003). Institutions are platforms to attract foreign investors to bring with them investment capital that will essentially contribute towards economic growth and henceforth help towards poverty reduction. Furthermore, Gui-Diby (2014) asserted that institutions promoted economic performance in Africa between 1995-2009 compared to when institutions were laxity implemented in 1980-1995. This means that implementation of reforms in 1995-2009 accelerated the catching up for more foreign investment than in 1980-1995.

There are recognised efforts which have been undertaken to build institutional reforms among partner states of EAC (UNECA, 2016; United Nations Economic Comission for Africa, 2013). However, vast literature including Asiedu (2006) have pointed out that the laxity to enforce legal and regulatory frameworks among African countries including partner states of EAC are still mediocre and incomplete. The outcome is that up to date there is low composition of foreign investors among the publicly listed companies in the partner states of EAC regardless of the open rooms and sweet attachments that welcome foreign investors.

However, there are dearth empirical studies among partner states in EAC that examined corporate governance and corporate performance relations. Studies that examined the relationship between ownership concentration and corporate performance reported inconclusive results either positive or negative. These mixed results could have been contributed by ignoring the important aspect of endogeneity problem particularly the dynamic endogeneity which is ignoring the influence of past performance (Flannery & Hankins, 2013; Nguyen, Locke, & Reddy, 2015; Zhou, Faff, & Alpert, 2014).

Furthermore, these studies hardly gave adequate attention on examining the monitoring and controlling behaviour of majority shareholders which are the main source for poor protection of minority shareholder (Filatotchev, Jackson, & Nakajima, 2013; Y. Hu & Izumida, 2008). Therefore, the current study addresses the endogenous problems by employing the dynamic generalised method of moments (GMM) estimator for a panel of 58 non-financial listed

companies at securities exchanges among partner states of EAC. To address the monitoring and expropriation behaviour by majority shareholders, this study examines the presence of nonlinear relationship by introducing the squared ownership concentration on the relationship between ownership concentration and corporate performance model.

1.3   Research Questions

This thesis is guided by the following research questions:

i)   What is the relationship between concentrated ownership and corporate performance in EAC?

ii)   Do the monitoring and expropriation by majority shareholders affect performance of the public listed companies in EAC?

iii)   Does the listed companies with the foreign ownership more technically efficient than the local ownership in EAC?

iv)   What impacts do the efficiency scores can bring to foreign ownership through integrating the agency theory and the resource dependency theory to influence the protection of minority shareholders in EAC?

1.4 Research Objectives

This study intends to achieve the following objectives:

i) To examine the linear relationship between the concentrated ownership and corporate performance among the public listed companies at the stock exchanges in the EAC

ii) To examine the impact of monitoring and expropriation behaviour by majority shareholders in the public listed companies in EAC.

iii) To examine the average technical efficiency of foreign ownership and average technical efficiency of local ownership in EAC.

iv) To integrate the agency theory and resource dependency theory to evaluate the role played by foreign ownership and its interaction with efficiency scores toward firm performance and protection of minority shareholders in EAC.

1.5 Significance of the Study

This study is conducted with the respect to the East African Community that existed since 2000 with the aspirations of becoming middle income economy by harmonizing the National Development Visions of the partner states. Thus, the study is expected to provide the following contributions.

1.5.1   To Academicians

This study intends to address the problem of minority shareholders in East African Community (EAC). The East African countries are characterised by weak legal and regulatory frameworks and ineffective markets for corporate control. Thus, this study relies on the internal mechanism through the ownership structure to effectively protect minority shareholders.

The study contributes to the literature by providing empirical evidence for the relationship between ownership concentration and corporate performance in EAC. It accounts for unobserved heterogeneity which is the source for endogeneity problem by employing the Generalised Method of Moments (GMM) estimator. The GMM estimator develops consistent and unbiased estimates that reduce the possibility of reporting spurious results. This analysis has the basis that countries in Sub-Saharan Africa including EAC are characterised by weak legal and regulatory frameworks which demonstrates poor protection of minority investors.

The study will also contribute to the existing empirical literature by examining the role played by efficiency scores to stimulate the relationship between foreign ownership and corporate performance among partner states. This will be achieved by integrating the agency and resource dependency theories. The resource dependency theory asserts that companies that exploit external sources via foreign ownership mitigates the horizontal problems and eventually promotes protection of minority shareholders. The efficiency scores

are developed using the Data Envelopment Analysis technique. This aspect of efficiency is rarely analysed in studies conducted in the context of the EAC. Efficiency of companies has been argued as a lens to attract significant capital investment from financial institutions and foreign investors.

1.5.2 To Policymakers

This study will serve as a vehicle to the authorities of East Africa Community, particularly the governments and capital markets authorities to assess the effectiveness of corporate governance practices towards economic growth and developments of the partner states.

The majority shareholders pursue private benefit of control by diverting company assets at the expense of the minority shareholders. Currently, there is an extensive recognition for protection of minority shareholders because they play potential role on the value creation and company performance (Sanjai Bhagat & Bolton, 2008; Black, Jang, & Kim, 2006a). Also, minority investors play the great role towards capital markets development and enhance the growth of the economy (La Porta et al., 1997; Levine, 1999).

The extent of expropriation by majority shareholders can be established and because of the importance for minority investors, policymakers will be advised to alternative measures necessary for protecting minority shareholders rights. Building business regulatory enhances the level of firms' efficiency and provides the possibility of enforcing the ownership structure diversification.

The enforcement of ownership structure welcomes the foreign ownership among the listed companies.

Moreover, the results of this study will alert policy makers among the partner states of the EAC to weigh the initiatives for adopting the strategy that was introduced in Malaysia known as Minority Shareholder Watchdogs Group (MSWG). The MSWG activism was introduced in Malaysia in 2000 and since its establishment, it has demonstrated success (Ameer & Rahman, 2009). The MSWG is the whistle blowers for minority shareholders who collect their queries and table them to the company management for suitable clarification during annual general meetings.

The World Bank through Doing Business has reported that the failure to undertake meticulous measures may cause companies to become vulnerable to severity by hindering potential investors to engage in companies activities and capital market developments henceforth deters corporate performance and economic growth of the region (Chakra & Kaddoura, 2015).

1.6   Organisation of the Thesis

Chapter one has introduced about the EAC aspirations and highlighted on the consequences for the laxity to enforce proper conduct of corporate governance practices. Problem statements, research questions and objectives of this study were introduced. Furthermore, the significances of this study for academics and policy makers were outlined. The remaining chapters of this thesis are

organised as follows. Chapter two of the study reviews theoretical perspectives of corporate governance, the ownership structure, corporate performance, DEA technique and relevant empirical past studies. Chapter three draws the discussion of the methodology of the study, data source and type of data. Econometric estimations for panel unit root tests and the panel cointegration tests analysis are developed. Data envelopment analysis (DEA) techniques for measuring technical efficiency are extensively discussed. Chapter four discusses the empirical findings of this study while chapter five draws the conclusion and provides the policy recommendations.

CHAPTER 2

LITERATURE REVIEW

2.1   Introduction

This chapter provides the theoretical framework of corporate governance by reviewing various theories and relevant empirical studies on ownership structure of corporate governance and the impacts of ownership structure on corporate performance. For the ownership and firm performance relationships, this chapter expands a discussion on efficiency of firm performance based on DEA technique.

2.2   Overview of Relevant Past Studies

2.2.1   Definitions of Terms

2.2.1.1 Corporation

The terms corporation/company/firm have been used interchangeably to symbolise a legal entity that is characterised by separation of ownership and control. A firm is entirely owned by shareholders who hire managers to run business operations. Shareholders are referred to as principals while managers are referred to as agents. The relationship between principals and agents is the

principal-agent relationship known as agency theory. Agency costs emanate from the agency problems between interests of principals and agents (Berle & Means, 1933; Jensen, 1986; Jensen & Meckling, 1976; La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 2000; Shleifer & Vishny, 1997; Young, Peng & Bruton, 2002).

2.2.1.2 Corporate Governance

This study is guided by the definition offered by Fulgence (2014b); Idowu and Çaliyurt (2014); Lovell (2005); OECD (2003). The literature defines corporate governance as a mechanism through which a business is controlled and directed in the best manner to achieve the predetermined goal of shareholders' wealth maximization. Thus, managers are accountable to directors who are accountable to shareholders. The main objective is to align the conflicts of interest and to fully utilise corporate resources towards effective firm performance (OECD, 2009).

2.2.1.3 Controlling Shareholders

According to OICU-IOSCO (2009), a service of OECD, the definition of controlling shareholder differs across jurisdictions. However, controlling shareholders have been generalised to mean any shareholder or entity who owns more than specific threshold of shares say above thirty, forty, fifty per cent of voting share. Controlling shareholders are regarded as a largest shareholder (block holder) and have influencing power over the corporate

management and decisions. Thus, the concentrated ownership implies that many firm shares are in the hands of few shareholders (Shleifer & Vishny, 1986, 1997).

2.2.1.4 Minority Shareholders

Accordingly, the term minority shareholders can be described according to the specific context. Thus, the OICU-IOSCO (2009) describes minority shareholders to imply those shareholders who hardly make decisions over corporate affairs. In turn, these shareholders should seek protection over decision pertaining firm operations (La Porta et al., 2000a; OECD, 2004).

2.2.2 Theories of Corporate Governance

There are several theoretical perspectives regarding corporate governance. The most common theories include agency theory, stewardship theory, stakeholders' theory and resource dependency theory. These theories have originated from different backgrounds including finance, economics, management, organisational theory, ethics and politics (Nicholson & Kiel, 2007; Rwegasira, 2000). Therefore, these four acknowledged theories are briefly described in the following sub-sections.

2.2.2.1 The Agency Theory or Finance Model of Corporate Governance

The agency theory originates from economics and finance. This theory describes the existing relationship between principals and agents within a corporation. This relationship is built on the basis of separation between ownership and control where principals who are the owners of the company hire agents to control the operations of the business. The main objective for any firm is for agents to work on behalf of principals for wealth maximisation. It is worth to note that, agency costs could arise in case of the agency problems (Fama & Jensen, 1983; Jensen & Meckling, 1976; Scott, 1998).

Jensen and Meckling (1976) pointed out that the agency theory is a theory about ownership structure of the firm. The theory implies existence of interest divergence between principals and agents and this is the main reason for the positions of Chairperson and CEO to be held by two different individuals. However, this theory focuses on accountability. The theory argues that it is not possible for one group of persons to be cautiously handle money of other people (Jensen & Meckling, 1976). Moreover, Scott (2003); Yermack (1996) opined that separating positions of the CEO and Chairperson promotes level of efficiency. Furthermore, outside independent directors are urged to engineer corporate efficiency (Fich, 2005; Jensen & Meckling, 1976).

2.2.2.2 The Stewardship Theory of Corporate Governance

Contrary to agency theory, the stewardship theory has its roots in sociology and psychology. The theory is based on the interests' convergence between principals and stewards through intrinsic motivation on achievement and self-actualization. The stewardship theory was developed by Donaldson and Davis (1991, 1993) whereby steward identify more utility through supportive and pro-organisational manners than using the self-serving manners. According to stewardship theory, the steward's satisfaction and motivation is related to the organisation success.

Premised on the trust between shareholders and stewards, one person holds the positions of the Chairperson and CEO (Donaldson & Davis, 1991). The reason for one person to hold both positions is to build centralised focus and strong leadership from a single person to accomplish company goals (Aduda, Chogii, & Magutu, 2013). Therefore, the theory claims that superior performance is linked with inside directors (Donaldson & Davis, 1991, 1993). However, the Cadbury report of 1992 plainly clarified the importance for the positions of CEO and Chairperson to be held by two persons. Thus, untying persons who hold positions of CEO and Chairperson stimulates corporate efficiency. Moreover, the empirical study by Kyereboah-Coleman (2008) to selected African countries established a significant negative effect on firm performance whenever the positions of CEO and chairperson are held by one person.

2.2.2.3 The Stakeholder Theory of Corporate Governance

The stakeholder theory was developed by Freeman (1984). The theory emanates from the view that business operations can be affected by different individuals. Thus, the stakeholders theory takes at wide scope by including different individuals (Aduda et al., 2013). These individuals include but not limited to management, investors, governmental bodies, employees, political groups, trade unions, customers, suppliers, competitors and the community (Freeman, 1984; Scott, 2003).

The stakeholder theory claims that a business is likely to be successful if it can create value to all stakeholders (Freeman, 1984). Thus, the theory advocates the need for many objectives to satisfy all stakeholders. This theory has its roots from the sociology and organisational behaviour which is based on serving many masters at the same time (Gillan, 2006).

2.2.2.4 The Resource Dependency Theory of Corporate Governance

The resource dependency theory (RDT) was developed by Pfeffer and Salancik (1978). This theory describes a corporation as an open system of unforeseen events that come from external environment. Contrary to stakeholders' theory which involves a group of all parties affected by the corporation, the RDT focuses on how directors of the companies can acquire resources required by the company. The RDT asserts that to understand the behaviour of an organization, one should study its ecology based on

33

environment science (Crook, Ketchen, Combs, & Todd, 2008; Hillman & Dalziel, 2003; Pfeffer & Salancik, 1978).

Pfeffer and Salancik (1978) opined that the possibility for external environment to promote corporate performance, board of directors are required to exploit available external resources. Other scholars, Douma, George, and Kabir (2006) have commented that in emerging economies the RDT ranges to availability of competitive advantage to performance advantages; the competitive advantages include the use of tangible and intangible assets to boost corporate performance.

2.2.3 The Model for this Study

The agency theory advocates that the principal-agent relationship roots from the separation of ownership and control that is branded with divergence of interests. Based on trustworthy, the stewardship theory is characterised by convergence of interests and there are no related agency costs. While the stakeholder theory is overwhelmed by successfulness for each individual, the RDT argues that success of corporations is enhanced through exploiting the external environment.

Several studies on corporate governance advocate the use of agency theory to describe ownership and performance relations. However, the agency theory should not be generalised to be valid to all economies because in developing economies including the EAC, the diversity of the relationship between

ownership and firm performance have awful intuition which is engineered by weak legal environment and absence of market for corporate control (La Porta et al., 1999, 1997, 2000a; Mak & Kusnadi, 2005; Melyoki, 2005; Rwegasira, 2000; Wright et al., 2005). Similarly, Rwegasira (2000); Young, Peng, Ahlstrom, Bruton, and Jiang (2008); Young et al. (2002) have pointed out that the agency theory by itself provides partial vision and inconclusive analysis for developing economies including the partner states of EAC where stock markets are still low in absorption capacity.

Because of such limitations in using one theory, Rwegasira (2000) emphasised the need for African countries to use a model that incorporates inputs from different models necessary to afford internationally aggressive capital markets for economic growth and development. Thus, this study incorporates the resource dependency theory and the agency theory for potential benefits that can be realised from different types of ownership.

The two theories are deemed appropriate for this study because as the RDT emphasises on incorporation of foreign ownership to diversify ownership structure because of the use of external resource that enhances efficiency of corporate performance (Dalziel, White, & Arthurs, 2011; Douma et al., 2006; Durnev & Kim, 2005; Hillman & Dalziel, 2003; Nicholson & Kiel, 2007), the agency theory emphasises on effective monitoring and controlling of company affairs through effective boards of directors where majority are independent. Thus, the agency theory requires the position of Chairperson and the CEO to be held by two different persons to widening transparency and accountability.

Lack of transparency among African countries including partner states of EAC has been a problem for effective corporate governance practices (Eyster, 2014; Rwegasira, 2000; Schwab, 2014).

The diversity for ownership structure implies accommodating different types of ownership within the company. According to resource dependency theory, foreign ownership promotes monitoring and disciplinary role for standard corporate governance practices. Thus, the outcomes for monitoring and disciplinary roles is creations of the multiplier effect to the minority shareholders (Crook et al., 2008; Douma et al., 2006; Filatotchev et al., 2003; Hillman & Dalziel, 2003; Young et al., 2008). Therefore, the agency theory and resource dependency theory are integrated in this study as suitable tools for investigating the efficacy of corporate performance.

Figure 2.1 presents the theoretical framework for this study. It is worth to note that the framework demonstrates independent and control variables to influence dependent variable. Moreover, the Figure offers information on the ability of efficient business environments that are decorated by quality institutions to excite foreign ownership towards superior performance and henceforth protection of minority of shareholders.

Independent variables

Dependent variables

Ownership structure:

Ownership concentration

Foreign ownership

Efficiency

Corporate performance:

Tobin's Q

ROA

Firm size
Leverage
Investment
Growth opportunity

Control variables
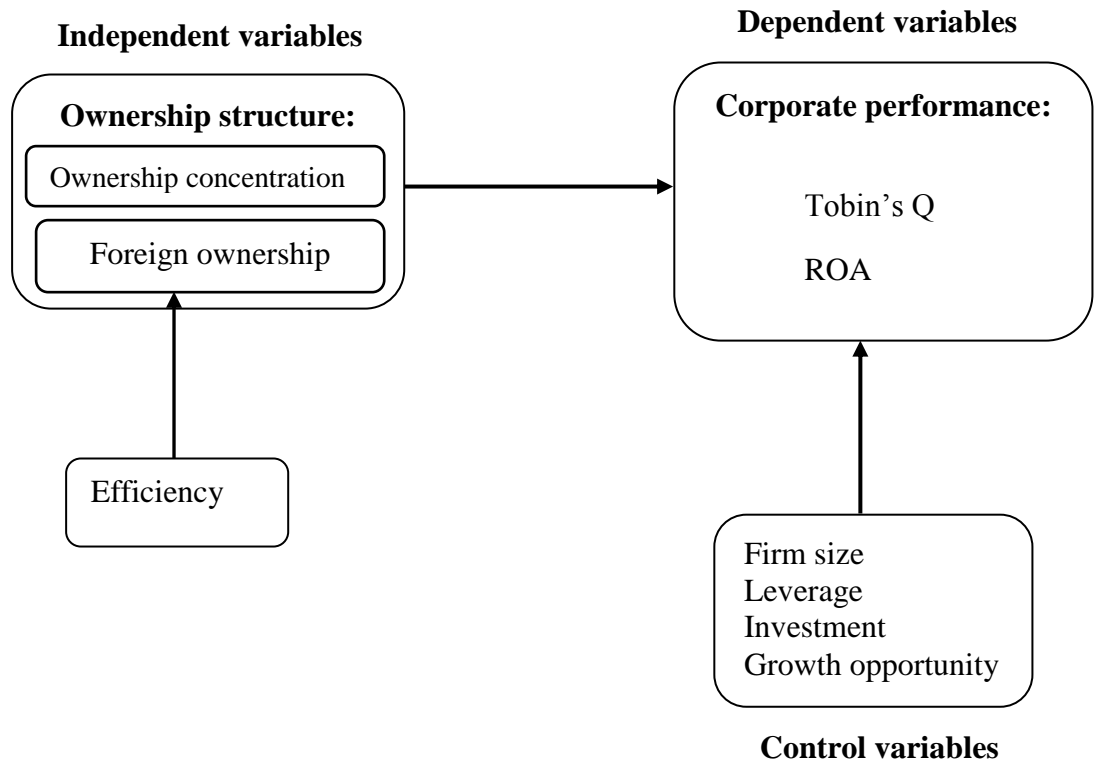
Fig. 2.1: Theoretical Framework

2.3   Agency Theory and Resource Dependency Theory

2.3.1   Agency Theory and Ownership structure

As point out earlier, the agency theory has its philosophy rooted in the relationship between shareholders who are principals and managers who are agents; principal-agent relationship. This relationship is created by separation of ownership and control whereby principals hire and entrust agents for running the business. The main objective is to maximise the shareholder's wealth (Jensen & Meckling, 1976). The corporate governance model by

Jensen and Meckling (1976) is the central model to explain the agency theory and ownership structure because it demonstrates the fundamental conflict of interest that occurs in an organisation. Figure 2.2 summarises the relationship between principals and agents as separation of ownership and control.
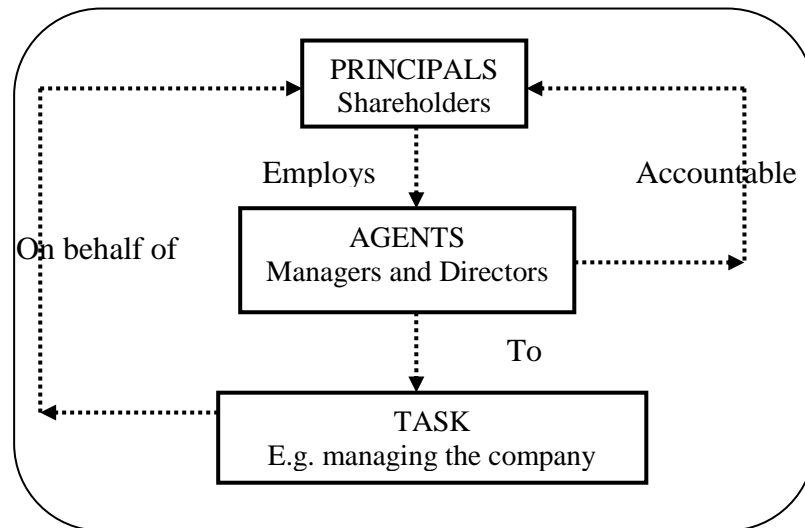
Figure 2.2: Relationship between Principals and Agents

Agency problems are the consequences of the conflict when agents or controlling shareholders take actions that are contrary to preferences of either the company or minority investors or both. Conflict of interests arise when managers undertake non profitable investment including undertaking negative NPV projects and diverting company resources (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2008; Fama & Jensen, 1983; Hermalin, 2005; Holmstrom & Kaplan, 2001; Jensen & Meckling, 1976; Shleifer & Vishny, 1997).

Building on the knowledge from Berle and Means (1933) that focuses on the dispersed ownership, Jensen and Meckling (1976) intended to model the

relationship between managers and principals. The agency costs associated by this relationship include but not limited to monitoring expenditures by shareholders, bonding expenditure by managers and the residual loss.

2.3.2 Agency Theory and Corporate Performance

Performance of the company is affected by internal and external mechanisms of corporate governance. Efficient corporate governance mechanisms are reflected on how they influence corporate performance. According to Vermeulen (2013), two kinds of agency problems can be distinguished namely vertical and horizontal problems (Dalziel et al., 2011; Young et al., 2008).

Vertical problems are the traditional conflict of interests between principals and agents; the principal-agency problems. This kind of conflict is common in developed economies, even though, the internal and external mechanisms of corporate governance are effective and are vehicles towards resolving conflicts. Internal mechanisms include bonding contracts, performance based incentives, ownership structure and monitoring mechanism whereas external mechanisms include legal and regulatory framework, market for corporate control and takeovers (Dalziel et al., 2011; Young et al., 2008). The enforced legal and regulations in developed economies enhance the board of directors to work effectively (Demsetz & Lehn, 1985; Jensen & Meckling, 1976; Melyoki, 2005; Young et al., 2008). Moreover, the markets for corporate control inculcate managers with discipline against hostile takeover which in

turn enhance efficiency corporate performance. Berle and Means (1933) argued that performance and dispersed ownership are inversely related.

Jensen and Ruback (1983) argued that market for corporate control in developed economies can be noted based on stable share price, high market capitalisation and when many companies aspiring to be listed at security exchanges (Mayer, 2002). Market for corporate control plays significant role of frightening to replace inefficient managements (Gillan, 2006). Thus, the takeover being a rule for market control provides the means for curbing the agency costs because performance decides the stake of management (Grossman & Hart, 1980).

The horizontal agency problem is a result of conflict of interests between majority and minority shareholders known as principal-principal problems (Morck, Wolfenzon, & Yeung, 2005; Young et al., 2008). This kind of conflict is mostly common in developing economies including EAC where companies are characterised by concentrated ownership (Dharwadkar, George, & Brandes, 2000; Melyoki, 2005). Regions with ownership concentration are attached with extensive expropriation, weak legal and regulatory framework, fewer listed companies, small and medium-sized companies, low dividend pay-out (Sáez & Gutiérrez, 2015), fewer investments in innovation, macroeconomic variables fluctuations and lack of markets for corporate control (Filatotchev et al., 2003; La Porta et al., 1999, 2000a; Morck et al., 2005; Rwegasira, 2000; Wright et al., 2005; Xu & Meyer, 2012; Young et al., 2008).

The pervasiveness ownership concentration creates fear for minority investors to make investment decisions (La Porta et al., 2000a). Thus, Sáez and Gutiérrez (2015) noted that majority shareholders may decide to use dividend policy to exploit minority investors. Berle and Means (1933) pointed out that concentrated ownership creates concentrated monitoring necessarily for superior performance. However, Young et al. (2008) argued that superior performance is achieved where legal and regulations are highly enforced. In the contrary, Rwegasira (2000) has pointed out that countries in emerging economies including partner states of EAC are laxity to enforce legal and regulatory outlines, as a result firms lag behind and have steadily poor performance.

Whereas in developed economies concentrated ownership is promoted in order to remedy principal-agent problem, in developing economies the concentrated ownership has continued to be the main source for principal-principal problems (Faccio, Lang, & Young, 2001; Grossman & Hart, 1980). The concentrated ownership creates incentive for controlling shareholders to be affiliated with managers for the expropriation of the company assets at the expense of minority shareholders (Shleifer & Vishny, 1986, 1997). Similarly, Backman (1999, 2004) added that there are numerous reasons that attract expropriation by majority shareholders including but not limited to political or personal ambitions.

2.3.3   Resource Dependency Theory and Corporate Performance

Numerous studies on corporate governance advocate the use of agency theory to study the relationship between ownership and firm performance. However, the view of agency theory cannot be generalised to be valid in developing countries including EAC. This argument comes from the notion that companies in EAC are dominated by weak corporate governance practices which hinder diversity of the ownership-performance relations. It is worth to note that, as pointed out earlier, the agency theory provides partial vision and inconclusive analysis for developing economies where stock markets are underdeveloped and are inefficient (Eisenhardt, 1989; Young et al., 2008, 2002).

The RDT was developed by Pfeffer and Salancik (1978) with the viewing that a company is an open system that can be enhanced by contingencies from external environments. These external environments provide competitive advantages in form of tangibles and intangibles for corporate survival and expansion. The RDT argues that the board of directors can play significant role towards acquiring the potential resources from outside for empowering company performance. These potential resources include information, access to finance, players in the market place and connection to firm's competitors (Barney, Wright, & Ketchen, 2001; Hillman & Dalziel, 2003).

Extant studies acknowledge the importance of board of directors to bring special treatment to the company because of their expertise and skills they

occupy. Thus, Booth and Deli (1999); Güner, Malmendier, and Tate (2008); Kroszner and Strahan (2001) support that the presence of the investment bankers to the boards is attached by their expertise to securing outside financing. Therefore, the pivotal role of the RDT dwells on the idea that the survival and growth of the company depends on how the board is related with other companies that regulate the external resources that are required by the company (Hillman, Withers, & Collins, 2009). This is because the alliance with the provider of external resources reduces uncertainties by providing resources needed by the company (Hillman, Cannella, & Paetzold, 2000; Simmons, 2012).

Moreover, Hillman et al. (2000) pointed on the important roles played by the board of directors to explore and bring external resources for survival and growth of the company; the resources which are important for the company include the financial capital, information expert market players and legitimacy. Thus, the board is tasked to secure the needed sources of finance to capacitate the company's financing liquidity and the needy knowledgeable market players who are equipped with market information.

By integrating the agency theory and RDT, ingredients of RDT would stimulate the agency theory through the shareholders' heterogeneity (Dalton, Daily, Certo, & Roengpitya, 2003; Douma et al., 2006). In addition, the diversity of the ownership structure are empirically justified for mitigating the horizontal problems (Colombo, Croce, & Murtinu, 2014; Dalton et al., 2003).

Empirical studies by Crook, Ketchen, Combs, and Todd (2008); Dalton, Daily, Certo, and Roengpitya (2003) opined that potential advantages accompanied by different types of ownership include monitoring facility, human capital (Keong, 2007) and provision of financial resources. moreover, Douma, George, and Kabir (2006) commented that the company achieves competitive advantages through acquiring intangible and tangible assets and that the protection of minority shareholders in developing economies can be achieved by including different types of ownership. This is to say that the authors are trying to put much emphasis on heterogeneity among shareholders, either foreign or domestic and strategic or financial resources, and more importantly on foreign investors who have more competitive advantage attached by benchmarking of good governance.

In general, the RDT plays potential role by underlining advantages attributed to external sources for efficient corporate performance. These advantages can be summarised to include human capital in terms of expertise, experience, knowledge, reputation and skills (Hillman & Dalziel, 2003), transfer of technology and capital flow (Barney, 2001; Barney et al., 2001; Nicholson & Kiel, 2007; Wright et al., 2005). Therefore, better firm performance is expected by incorporating these ingredients. Dalton et al. (2003) have added that ownership diversification has strong impact on firm performance especially companies with foreign investors that are based on legitimacy principles (Mudambi & Pedersen, 2007).

2.4   The Internal and External Mechanisms of Corporate Governance

Since there is an extant literature that document the overwhelming status of poor protection of minority investors in Sub-Saharan Africa including the East African countries because of weak legal and regulatory frameworks and the absence of market for corporate control, the aggregation of external mechanism and internal mechanism is pivotal for effective corporate governance. The external and the internal mechanisms of corporate governance are responsible for protecting all shareholders including the minority shareholders. The main objective of any company should be to maximise shareholders' wealth whereby interests of majority and minority investors become aligned (Cremers & Nair, 2005; Huyghebaert & Wang, 2012; Munisi et al., 2014).

The external mechanism of corporate governance accounts for the legal and regulatory environments which in turn influences the market for corporate control and the takeovers. The concentrated ownership in EAC is an outcome of the failed external mechanism. The failure of external mechanism occurs whenever the concentrated ownership engage into expropriation of company assets at expense of minority shareholders (Jiang & Peng, 2011; La Porta et al., 2000a; Morck et al., 2005; Young et al., 2008).

However, the internal mechanism of corporate governance consist of ownership structure, the board of directors, financial transparency, consistency informational disclosure and performance incentives (Cremers & Nair, 2005;

Denis, 2001; Dyck, 2001; Hart, 1995; Jiang & Peng, 2011; La Porta et al., 2002; Melyoki, 2005; Munisi et al., 2014; Peng & Jiang, 2010; Young et al., 2008). Thus, internal mechanism of corporate governance works as alternative mechanism following the failure of legal, regulatory and capital markets.

The functioning external and internal mechanisms of corporate governance promote corporate performance and protection of minority investors. The emerging economies including EAC are crowded by underdeveloped capital markets, lack of market for corporate control and laxity to enforce legal and regulatory frameworks. The outcomes of these obstacles entail weak corporate governance that ruins corporate performance and jeopardise the protection of minority shareholders (Dalziel et al., 2011; Jiang & Peng, 2011).

Thus, this study is based on the internal mechanism of corporate governance because proper ownership structure enhances corporate performance and helps to mitigate agency problems. The adoption of ownership structure is important for exploring diversified skills. The proper ownership structure provides protection of the company properties including interest convergence for all stakeholders. Moreover, the diversified shareholders provide monitoring and controlling tool towards actions of the majority shareholder (Huyghebaert & Wang, 2012; Jiang & Peng, 2011).

2.5 Overview of Ownership Structure and Corporate Performance

Ownership structure has been cited as among the factors that determine corporate performance ownership (Shleifer & Vishny, 1986). There are different types of ownership that determine corporate performance but in this study ownership is limited to concentrated and foreign ownership.

2.5.1 Ownership Concentration and Corporate Performance

Ownership concentration refers to a situation in which large percentage of company's shares are in hands of few shareholders. Shareholders who own few shares in a corporation are referred to as minority shareholders. It is argued that the ownership concentrated should imply overly monitoring which constitute strong firm performance because companies of this nature are not expected to invest into non-profitable investments and non-related mergers or takeovers (Amihud & Lez, 1981; Berle & Means, 1933; Stijn Claessens & Djankov, 1999).

Thus, the accumulated concentrated monitoring implies superior performance and convergence of interests of all stakeholders. Grossman and Hart (1986) insisted that because of high stake employed into the company, majority shareholders will work entirely in order to enjoy the benefits of monitoring and controlling endeavours. The agency theory considers the concentrated ownership as mitigating vehicle of the agency problems which accelerates firm performance (Jensen & Meckling, 1976).

However, there are studies which view concentrated ownership as a source of an extensive expropriation of majority shareholders at expense of minority investors and creditors (La Porta et al., 1999, 2000a). The majority shareholders create costs and benefits which weakens corporate performance through extraction of minority investors (Demsetz, 1983; Fama & Jensen, 1983; Morck, Shleifer, & Vishny, 1988; Schulze, Lubatkin, Dino, & Buchholtz, 2001; Shleifer & Vishny, 1997; Villalonga & Amit, 2006).

According to Jiang and Peng (2011); La Porta et al. (2000a); Morck et al. (2005); Young et al. (2008), concentrated ownership evolves in the region which is characterised by weak legal and regulatory frameworks and under fault market for corporate control. Concentrated ownership results into inefficient performance because of the incentive motives created by controlling shareholders (Bebchuk & Fried, 2003, 2006; Bebchuk, 1999; Chen & Young, 2010). This view constitutes a negative effect between ownership concentration and corporate performance.

The prevalence of expropriation by majority shareholders creates poor protection of minority shareholders. Majority shareholders are said to be highly motivated by two mutually inclusive shared benefits of control and private benefit of control. These shared benefits provide the possibility of majority shareholders to align their interests with the directors and managers to rule the management decisions (Holderness, 2003; Su, Xu, & Phan, 2008).

2.5.2   Foreign Ownership and Corporate Performance

Foreign ownership refers to the proportion of shares that are owned by foreign investors in a host country (Choi, Lee, & Williams, 2011). Chari, Chen, and Dominguez (2012); Lee (2008) pointed out that foreign ownership can be measured by the proportion of shares held by foreign investors.

Among the important issues discussed by academicians and policy makers has been the impact of foreign ownership to local firms. Host countries normally attract foreign ownership by providing special attachments including firm specific compensations which are made not available to domestic firms. Thus, the special attachment available to foreign ownerships should result into superior performance (Caves, 2007; Görg & Strobl, 2004) because foreign ownership is attached with superior monitoring, management techniques, and technological transfer that are uncommon to local firms. Thus, domestic companies have the possibility to benefit from the spill over effect and advanced productivity of foreign ownership (Kinda, 2012). In this line, Dalton et al. (2003) argued that there are specified significant advantages that can be created from heterogeneous ownership that include unique and singular resources which can create competitive advantage for firms.

The RDT claim that the presence of foreign investors in domestic firms play a monitoring role including standard corporate governance practices thereby reducing the possibility of controlling shareholders to exploit firm's assets at expense of minority investors (Bjuggren, Eklund, & Wiberg, 2007; S. Lee,

2008). As mentioned earlier, the foreign ownership in developing countries have competitive advantage accompanied by superior managerial techniques, technology, easy access to external finances, and increase competition with domestic companies (Mueller & Peev, 2005; Vincent Okoth Ongore, 2011). For instance, Ongore (2011) cited that the presence of foreign ownership in Kenya promoted superior management to some of listed companies.

Similarly, Pervan, Pervan, and Todoric (2012) pointed out that domestic companies in Croatia which composed foreign ownership had superior performance than companies which had no composition of foreign ownership. This is to say that foreign controlled firms have better performance than domestic controlled firms. However, foreign investors should not be solely considered as cure for problems facing developing economies (Chari et al., 2012b; Kim, 2010), rather both domestic and foreign ownership should be seen to have positive effect to one another (Chari et al., 2012).

2.6   Foreign Ownership and Technical Efficiency

2.6.1   Introduction

The textbooks in classical microeconomics assume that companies have similar characteristics. This presumption of homogeneity claims that companies operate at the same level of productivity. Thus, the available resources are required to ensure that maximum output is achieved (Badunenko, Fritsch, & Stephan, 2006; Battese & Coelli, 1992). However,

50

companies in developing economies including the partner states of EAC operate under less competitive environment because capital markets are less developed (Rwegasira, 2000). As a result, level of productivity among partner states tends to fluctuate overtime. This makes firms to be heterogeneous.

Some literature highlight that aspects such as technical, allocative, scale and cost efficiencies are available for measuring the efficiency of the firm (Coelli, Rao, O'Donnell, & Battese, 2005; Farrell, 1957; Oberholzer, 2014). However, with vast measures highlighted above this study employs the technical efficiency. The technical efficiency is employed because is superior in assessing the ability of a corporate to convert inputs like labour and capital into optimal output (Coelli et al., 2005). Moreover, the technical efficiency is the only measure which is regarded as managerial efficiency because it assures the management with the power to exhibit direct control (Isik & Hassan, 2003).

2.6.2 Firm Technical Efficiency

The concept of technical efficiency was initially introduced by Farrell (1957). The idea behind technical efficiency is that, companies employ resources like labour, capital and technology to achieve optimal output. This phenomenon emanates from the fact that firms can estimate required inputs to maximise outputs. Thus, technical efficiency comprises input-oriented and output-oriented (Coelli et al., 2005; Coelli, Rahman, & Thirtle, 2005; Farrell, 1957).

Two predominant techniques are available for measuring firms' technical efficiency namely, the parametric and non-parametric measures. On one hand, the parametric measures are based on the Stochastic Frontier Analysis (SFA) and on the other hand, the non-parametric measures are based on the Data Envelopment Analysis (DEA). The DEA technique involves the use of linear programming whereas the SFA technique involves the use of the functional form (Berger & Humphrey, 1997; Coelli et al., 2005; Zheka, 2005).

Studies in corporate governance analyse firms' efficiency based on the DEA technique. The use of DEA has an advantage since it allows for multiple inputs and outputs and does not require presumption of functional form of the frontier (Nedelea and Fannin, 2013; Ramanathan, 2003; Ray, 2004). Also it has been claimed that DEA has an ability to work with small sample size. This makes it friendly when employing the Generalised Moment of Methods. In general, the DEA technique uses Linear programming to convert multiple inputs and outputs into efficiency scores (Madhanagopal & Chandrasekaran, 2014; Titko, Stankevičienė, & Lāce, 2014; Zheka, 2005).

DEA has an ability to provide multi-information details for all Decision Making Units (DMU). The more attractive information to publicly listed companies in EAC is that DEA can describe DMUs in their efficient or inefficient form and acts as a device for converting inefficient firms into efficient (Berger & Humphrey, 1997).

DEA technique can be estimated using either the Constant Return to Scale (CRS) or the Variable Return to Scale (VRS) models. The CRS model was developed by Charnes, Cooper, and Rhodes (1978) whereas the VRS was developed by Banker, Charnes, and Cooper (1984). The CRS and VRS models are classified as radial models because they aim at obtaining utmost rate of reduction of inputs to achieve certain level of outputs (Avkiran, Tone, & Tsutsui, 2006; Fazli & Agheshlouei, 2009; Sueyoshi & Goto, 2012).

It is worth to note that, DEA models have another form referred to as slack based measures (SBM) which are not discussed here but they are classified as non-radial models (Avkiran et al., 2006; Fazli & Agheshlouei, 2009; Tone, 2001). This study is based on the radial model for reasons explained in the proceeding paragraphs.

There are two orientations of inputs or outputs that are employed whenever estimating efficiency scores based on CRS or VRS models. Whereas the input oriented involves minimising inputs for the same level of outputs, the output oriented involves maximising the output for the same level of inputs (Coelli et al., 2005; Cooper, Seiford, & Tone, 2007; Cooper, Seiford, & Zhu, 2011). It is important to note that, the CRS model will always generate similar scores on either orientation but the VRS model will generate different scores (T. J. Coelli et al., 2005; Dwivedi & Ghosh, 2014; Fare & Lovell, 1978).

Experts of DEA technique argue that CRS model is superior whenever applied to the DMUs that operate at an optimal scale but when DMUs are not at an

optimal scale it is better to use VRS model. Factors such as imperfect capital markets, technology, finance constrains and unenforced government regulations trigger the use of VRS (Avkiran, 2006; Coelli et al., 2005; Cooper, Seiford, & Tone, 2006; Ramanathan, 2003; Ray, 2004).

This study employs the VRS model to estimate the efficiency scores of public listed companies in EAC. This is justified by the problems facing capital markets in EAC which are similar to majority of developing economies in terms of low market capitalization, fewer listed firms, imperfect capital markets, limitations on finance and unenforced regulations (Banker & Maindiratta, 1988; Dhanani, 2005; Glen, Karmokolias, Miller, & Shah, 1995; Kibuthu & Osano, 2010; Kurniasih, Siregar, Sembel, & Achsani, 2011; Singh, 2003; Yabara, 2012).

2.6.3   Relationship between Foreign Ownership and Efficiency

In corporate governance perspectives, foreign ownership helps to facilitate and enhance corporate performance (Delis & Papanikolaou, 2009). Foreign ownership is explained by RDT to have significant positive impact on efficiency firm performance. Thus, foreign ownership being an aspect for firm efficiency is associated with aligning horizontal problems (Zheka, 2005).

Foreign ownership is rich in resources of foreign shareholders who are capable of utilising business environment to enhance the level of firm efficiencies. The presence of foreign equity in host countries has significant effect on corporate

54

performance. It is not guaranteed that firms with foreign investors will always perform better than locally owned firms. However, companies which have more foreign ownership significantly perform better and thus the level of firm's efficiency increases. This level of efficiency is contributed by easy access to financing, training courses given to workers, technological transfer, management know-how, employing and maintaining quality labour and access to international market (Chen, Lin, Lin, & Hsiao, 2016; Choi et al., 2011).

Moreover, foreign ownership helps locally owned firms to intensify the R&D activities that helps to utilise resources in technological development and enhances corporate performance (Choi et al., 2011). Companies that have significant number of foreign ownership have relative advantage of managerial and technological resources. Thus, these firms utilise their scarce resources efficiently (Zhu, Xia, & Makino, 2015) and under the enforced institutional quality, the transaction costs become lower (Barasa et al., 2017; Meyer, Estrin, Bhaumik, & Peng, 2009). Firms that hold foreign investors are capable of creating partnership with other companies to extend production and exploit economies of scale through Mergers and Acquisitions (Chen, Lin, Lin, & Hsiao, 2016; Delis & Papanikolaou, 2009; Zahra & George, 2002).

Extant literatures have examined the influence of foreign ownership on company efficiency and the efficiency of domestic and foreign firms. Reasons other than those stated above are that foreign equity is less subjective to regulations than locally owned firms. Moreover, the institution quality or condition set ups in the host countries have been cited to facilitate foreign

investors to excel level of efficiencies (Berger & Humphrey, 1997; Demirguc-Kunt & Huizinga, 2000).

Foreign ownership has also been associated with higher wage payments among Sub-Saharan Africa firms. For instance, study carried in Kenya concluded that firms with foreign ownership pays an average wage of about 8 per cent to 23 per cent higher than wages paid by locally owned firms. This wage difference has positive influence for work devotion among employees towards firm efficiencies (Foster-McGregor, Isaksson, & Kaulich, 2015; Strobl & Thornton, 2004; Velde & Morrissey, 2003).

In general, foreign ownerships have more average efficiency based on the quality institutions and regulatory framework of the host country that facilitate firm efficiency. This means that the efficiency of foreign ownership is facilitated by friendly business legal environment while dubious business legal environment devastates operations of foreign ownership (Mian, 2006).

The institutional framework or legal environment that provide favourable sphere for workability of foreign ownership include but not limited to regulatory quality, government effectiveness, and political stability (Kaufmann, Kraay, & Mastruzzi, 2010). These legal frameworks are what constitute the governance indicators. These indicators have been empirically verified that they contribute towards firm efficiencies. For instance, Lensink, Meesters, and Naaborg (2008); Mian (2006) asserted that good institution frameworks in the host country nourishes the efficiency for foreign ownership.

Quality institutions do not only provide efficiency gear for foreign ownership to excel in performance, they also provide mechanism for attracting FDI inflows which in turn impact economic growth (Acemoglu et al., 2003; Bevan et al., 2004; World Bank, 2016a).

Premised on the above benefits, DEA technique is used to measure firm efficiency (Bozec, Dia, and Bozec, 2010) where foreign ownership is an enforcement for companies to practice standard corporate governance (Dalton et al., 2003; Kinda, 2012). Thus, it is the expectation of this study that the interaction between firm efficiency and foreign ownership should create superb corporate performance. Therefore, in order to capture for the differential impact of foreign ownership on firm performance, efficiencies should be interacted with foreign ownership (Bürker, Franco, & Minerva, 2013; Zheka, 2006).

2.7   Empirical Studies on Ownership Structure and Performance

2.7.1   Introduction

This section presents empirical studies conducted by different authors on the relationship between ownership structures and corporate performance. Two ownership structures; ownership concentration and foreign ownership have been empirically studied because of their impact they bring on firm performance. Thus, by reviewing the past relevant empirical studies this study enriches the knowledge on the corporate governance and performance in EAC.

2.7.2 Empirical Studies

The relationship between ownership structure and firm performance has been extensively studied. The vast of these studies have germinated from the work of Demsetz (1983) who claimed that incentive towards varying ownership structure lies on the shareholders' worth maximization. Demsetz highlighted that there are firm specific factors which influence firm performance other than corporate governance variables.

Factors like management skills, company philosophy, past performance and technological innovations impact firm performance. These factors are sources of unobserved heterogeneity which create endogeneity problems and should be controlled to avoid reporting spurious results. This means that valid instruments need to be introduced in the model to reduce the likelihood of reporting biased results (Sanjai Bhagat & Jefferis, 2002; Flannery & Hankins, 2013; Y. Hu & Izumida, 2008; Nguyen et al., 2015; Zhou et al., 2014).

According to Demsetz (1983), endogeneity is a situation whereby regressors are correlated with residuals. This situation can occur if relevant variables are omitted in the model especially when the variables if are correlated with one of independent variables. Thus, omission of some variables in the model is referred to as model specification (Greene, 2014). However, the omission of some variables in the model does not happen without creating some problems (Baltagi, 2005).

Moreover, the endogeneity problem is associated with the simultaneity. Simultaneity occurs when firm performance influences ownership structure and at the same time ownership structure influences firm performance. In this situation, performance and ownership structure are arguably simultaneously determined (Wintoki, Linck, & Netter, 2012; Wooldridge, 2002).

Furthermore, the endogeneity problem is caused by unobserved heterogeneity which affects performance and regressors. The problem of unobserved heterogeneity may cause a researcher to report spurious relations like reporting a negative relationship instead of positive relationship. Finally, the outcome of this effect leads into rejecting a true hypothesis (type I error) or rejecting the false hypothesis (type II error) (Himmelberg, Hubbard, & Palia, 1999; Klapper & Love, 2004b; Wintoki et al., 2012).

The concept of endogeneity problem was introduced by Demsetz (1983). The author intended to alert scholars on the likelihood of reporting biased results. With the Demsetz's idea in mind, it was expected that subsequent studies would examine the impact of endogeneity. There are few subsequent studies that have examined the endogenous problems.

The study by Demsetz and Lehn (1985) was among the first ones to empirically examine the relationship between concentrated ownership and corporate performance. Demsetz and Lehn intended to examine the earlier prediction by Berle and Means (1933) that ownership concentrated and performance have positively relationship. Demsetz and Lehn employed the

cross - sectional data of 511 U.S firms over 1976-1980. The ownership concentration was categorised as 5, 20 largest owners and Herfindahl index and performance was measured using accounting ratio. The study concluded that there is no significant ownership concentration and performance relation.

Another study by Demsetz and Villalonga (2001) employed 223 cross-sectional data of U.S firms over 1976-1980. After controlling endogeneity, the study reported no statistical significant ownership structure and performance relations. Whereas, the study by Omran et al. (2008) on a sample of 304 firms from four Arab countries namely Egypt, Jordan, Oman and Tunisia reported no significant ownership concentration and market value relations after controlling endogeneity using country and firm effects as instrumental variables on 2SLS. Similar, conclusions of no significance relationship were reported (Demsetz & Villalonga, 2001; Holderness & Sheehan, 1988; Luo et al., 2012; Murali & Welch, 1989; Omran et al., 2008; Tsegba & Ezi-Herbert, 2011).

McConnell and Servaes (1990); Morck et al. (1988); Short and Keasey (1999) carried their studies by treating ownership structure as exogenously determined and reported nonlinear relationship between ownership structure and firm performance. Morck et al. (1988) examined the cross sectional relationship between ownership and performance and reported significant positive nonlinear relationship. Studies that reported a significance curvilinear relationship between ownership structure and firm performance employed performance measures of Tobin's Q, ROA and ROE. Moreover, the nonlinear

results described the hypothesis of convergence and entrenchment behaviour by controlling shareholders in the corporation.

Studies that reported positive relationship between concentrated ownership and corporate performance benchmarked Berle and Means (1933). It is worth to note that Berle and Means (1933) pointed out that concentrated ownership increases performance because of the concentrated monitoring created by majority shareholders. The study carried by Claessens and Djankov (1999) on the cross sectional data of 706 Czech Republic firms over 1992-1997 reported significant positive ownership concentration and profitability relationship. But these results were weak when conducted a robust check for endogeneity.

Mak and Kusnadi (2005) examined 230 Singapore listed firms and 230 Malaysia listed firms reported significant positive ownership concentration and corporate performance relationship. The results based on Malaysia firms were further studied by Haniffa and Hudaib (2006) who used data of 347 listed companies at Kuala Lumpur Stock Exchange over 1996-2000. By employing Tobin's Q and ROA as company performance measures, the study reported on significant positive relationship between ownership concentration and ROA but significant negative relationship with the Tobin's Q.

Likewise, there are vast studies that reported significant positive relationship between ownership concentration and corporate performance (Bai, Liu, Lu, Song, & Zhang, 2006; Z. Chen, Cheung, Stouraitis, & Wong, 2005; Cho & Kim, 2007; Earle, Kucsera, & Telegdy, 2005; Gugler & Weigand, 2003;

Omran et al., 2008; Singh & Gaur, 2009; Thompson & Hung, 2002; Tsionas, Merikas, & Merika, 2012). These studies concluded that the controlling shareholders play significant monitoring role towards firm performance. For instance, Tsionas et al. (2012) based on 107 internationally cross sectional shipping firms in year 2009 and controlled for endogeneity problems using GMM, reported significant positive ownership concentration and performance relations. In general, results by Tsionas et al. (2012) are found to contradict the earlier prediction by Berle and Means (1933) in developed economies whereby ownership structure is dispersed.

Several other studies reported a negative relationship between concentrated ownership and firm performance. The main argument of these studies is based on the expropriation by the controlling shareholders at the expense of minority shareholders (Y. Hu & Izumida, 2008). This behaviour is associated with expropriation by controlling shareholders commonly in developing economies (Jiang & Peng, 2011; Peng & Jiang, 2010; Young et al., 2008, 2002). For instance, Bebchuk (1999); Morck et al. (1988); Ongore (2011) reported significant negative relationship between ownership concentration and corporate performance. More specifically, Ongore (2011) reported significant negative relationship for listed firms at NSE in Kenya over 2006-2008.

Moreover, the study that was carried by Akbar, Poletti-hughes, El-faitouri, and Zulfiqar (2016) on a sample of 435 non-financial listed firms over 1999-2009 examined the corporate governance and firm performance relationship in UK. After controlling for endogeneity problems using GMM estimator, the study

reported significant negative relationship between corporate governance and corporate performance.

Studies that examined the relationship between foreign ownership and corporate performance are inconclusive. The resource dependence theory argues that a corporation is an open system which allows the entrance of external resource like foreign ownership and mergers and acquisitions to improve corporate performance (Douma et al., 2006; Pfeffer & Salancik, 1978). Empirical evidence by Chari et al. (2010) using data collected over 1980-2006 for U.S firms and employing probit regression reported significant positive relationship between foreign ownership and firm performance.

Bai et al. (2006) analysed the impact of foreign ownership on performance using panel data of 1004 publicly listed companies in China. Using the OLS for market performance measure and accounting ratio, the study concluded that foreign ownership has positive impact on performance. Similarly, Douma et al. (2006) applied the OLS to 1005 Indian firms for data collected over the period of 1999-2000 and concluded on significance positive relationship between foreign ownership and company performance. Similar results were concluded by (Filatotchev, Stephan, & Jindra, 2008; Xu, Zhu, & Lin, 2005). However, Tsegba and Ezi-Herbert (2011) using the cross sectional data of 73 Nigerian listed companies over the period of 2001-2007 found insignificant relationship between foreign ownership and corporate performance.

The summary of the past empirical studies on ownership structure and corporate performance are summarised in Table 2.1.

Table 2.1: Empirical Studies on Ownership Structure and Firm Performance

Author	Market	Period	Variables used	Data type, Methodology	Summary of findings
Demsetz and Lehn (1985)	U.S. 511 firms	1976 - 1980	Accounting profit rate Concentrated ownership (5 largest owners, 20 largest owners, Herfindahl index) firm size, price volatility, instability of firm environment	Cross sectional data using OLS.	No significant relationship betwe concentrated ownership and firm performance
McConnell and Servaes (1990)	U.S. 1173 firms U.S. 1093 firms	1976 1986	Tobin Q block holders ownership	Cross sectional data, OLS	Block holders & Tobin Q have no significa relations.
Claessens and Djankov (1999)	706 firms of the Czech Republic	1992 – 1997	Profitability and labour productivity concentrated ownership of top five blocks	Cross sectional data used the OLS, Hausman test, REM	High concentrated ownership implies the high firms' profitability and labour productivity. Non monotonic relationship was found.

Table 2.1 *(continued)*

Author	Market	Period	Variables used	Data type, Methodology	Summary of findings
Xu and Wang (1999)	China listed companies	1993-1995	Market to value ratio, ROA, ROE Concentration (top 5, 10, Herfindahl) ownership	Single equation (linear) LSDV	Positive relationship between concentration and profitability
Thomsen and Pederson (2000)	100 non-financial European listed firms	1991-1996	ROA, MBV, Sales growth ownership concentration, owner identity, sales, Beta, leverage	Cross sectional data OLS	Inverted U-Shaped relationship between concentrated ownership and performance
Demsetz and Villalonga (2001)	223 U.S. firms	1976 - 1980	Tobin Q, profit rate Concentrated ownership	Cross sectional data, OLS, 2SLS techniques	OLS - ownership and performance are significant. 2SLS insignificantly explain the relationship
(La Porta et al., 2002)	27 Wealthy Economies 539 large firms	1995-1997	Tobin's Q Ownership concentration growth in sales, wedge, CF rights	Panel data, used the REM	Firms in countries with better minority shareholder protection, and firms with higher cash-flow rights by controlling owners have higher performance

Table 2.1 *(continued)*

Author	Market	Period	Variables used	Data type, Methodology	Summary of findings
Thompson and Hung (2002)	Singapore		ROE, Ownership Concentration	Cross sectional data; OLS	Significant positive relationship between ownership concentration and ROE
Gugler and Weigand (2003)	U.S 491 listed firms Germany 167 listed firms	1989-1997 1991-1996	ROA Large shareholders, Insider ownership size, growth, capital intensity, and capital structure	Panel data, used OLS, IV	Large shareholders affect firm performance separately and exogenously, as is the case in the German system. Total insider holdings are endogenously determined for US firms.
Earle et al. (2005)	Hungary 168 firms	1996-2001	ROE, operating efficiency (OE) Ownership concentration (the largest 2, 3, and all)	Panel data, used OLS, FEM	Size of the largest blocks increases profitability and efficiency strongly and monotonically
Bai et al. (2006)	China 1004 listed companies		Tobin's Q, Concentrated ownership Foreign ownership	Panel data; OLS	Nonlinear relationship between largest shareholders and performance. Concentrated ownership and foreign ownership is positively related to firm performance. Negative relationship between the largest shareholder and firm value. Insider ownership is not related to firm value.

Table 2.1 *(continued)*

Haniffa and Hudaib (2006)	Malaysia 347 firms listed on KLSE	1996 - 2000	Tobin's Q, ROA Ownership concentration, Gearing, CAPEX, firm size, industry	Cross sectional data; OLS	Ownership concentration has positive significance relationship with accounting measure. Gearing and CAPEX are positive a significant related with Q. Size has negati significance.
Hu and Izumida (2008)	Tokyo Stock Exchanges	1980-2005	Tobin's Q, ROA Ownership concentration, Investment, Firm size, sales growth, Volatility, Liquidity	Panel Data; FEM; GMM	U-Shaped relationship between ownership concentration and performance
Lambertides and Louca (2008)	92 shipping firm listed on EU stock exchanges	2002-2004	Operating performance Foreign ownership	Panel Data; FEM	Significant positive relationship between foreign shares and operating performance
Tsegba and Ezi-Herbert (2011)	Nigeria 73 listed companies	2001 - 2007	Tobin Q, ROE Concentrated ownership, Foreign ownership	Cross sectional data; OLS	There is no significant impact between concentrated, foreign ownership and firm performance.
Vincent Okoth Ongore (2011)	Kenya 42 listed firm from	2006-2008	ROA, ROE, DY, ownership concentration	Cross sectional data; Pearson correlation, Logistic Regression and Stepwise Regression	Negative relationship between concentrated Ownership and performance.

68

Table 2.1 *(continued)*

Tsionas et al. (2012)	107 firms listed internationally	For 2009	ROE, ROA Concentrated ownership Firm size, leverage, liquidity, age	Panel data; 2SLS, 3SLS, GMM	Significant positive relationship between concentrated ownership and firm performance
Huang and Boateng (2013)	The China 101 listed real estate firms	1999 - 2010	Tobin's Q concentrated ownership size, leverage, growth	Unbalanced Panel data VCE, FEM, GMM	Concentrated ownership has significant positive nonlinear relationship.
Phung and Hoang (2013)	Vietnamese Listed Firms	2007-2012	Firm performance foreign ownership	Panel data; FEM	Foreign ownership has a U-shaped relationship with firm performance (ROA).
Pinto and Augusto (2014)	4163 non-financial Portuguese firms	2003-2008	Operational performance, Ownership concentration, insider ownership,	Panel data; OLS; GMM	Nonlinear relationship between ownership concentration and operational profitability
Vintilă and Gherghina (2014)	Romania 68 listed firms	2007-2011	Tobin's Q Concentrated ownership (1st, 2nd & 3rd major shareholders)	Unbalanced panel data; Multivariate regression model, FEM	The sum of the three largest shareholders positively influence corporate performance

Table 2.1 *(continued)*

Author	Market	Period	Variables used	Data type, Methodology	Summary of findings
Lozano, Martínez, and Pindado (2015)	16 European countries; 1064Listed firms.	2000-2009	Tobin's Q Ownership concentration Firm size, leverage, firm risk, cash flow, lagged firm performance, country and industry dummies	Panel data; GMM system, Hansen test, Wald test	The relationship between ownership concentration and firm performance is U-shaped
Nguyen, Locke, and Reddy (2015)	Singapore and Vietnam	2008-2011	Tobin's Q Ownership concentration, board size, firm size, leverage, national governance quality	Panel data, OLS, FEM, GMM	Positive relationship between ownership concentration and performance. No evidence of nonlinear relationship.
Rahman and Reja (2015)	Malaysia: 21 commercial banks (9 local, 12 foreign banks)	2000 - 2011	ROE, ROA, Foreign ownership	Panel data; Multiple regressions with FEM, REM, GLS, and Hausman test.	Foreign ownership has no significant impacts on performance.
Hassan, Hassan, Karim, and Salamuddin (2016)	Bursa, Malaysia	2007-2012	Tobin's Q Ownership concentration, firm size, leverage, investment, growth, ROA	Panel data: FEM, GMM	No empirical evidence of nonlinear relationship between ownership concentration and Tobin's Q.

Source: Author compilation

2.8 Observation of the Methodology for the Past Studies

Empirical studies for ownership concentration and foreign ownership on company performance were conducted in different markets by employing different techniques. Table 2.1 has summarised different past studies that were carried on different markets, periods and based on different approaches.

Table 2.1 reveals that authors carried different methodologies to achieve stated objectives. However, the following observations were noticed. First, studies that used the cross sectional data suffered the effect of individual heterogeneity. The nature of cross sectional data does not offer suitable instruments to handle possible individual differences responsible for endogeneity of ownership (Börsch-Supan & Köke, 2002). Thus, to account for problems of unobserved heterogeneity that are not handled by cross-sectional data, this study employed the panel data. Panel data and their advantages are discussed in chapter three in subsections 3.4.1 and 3.4.1.1 respectively.

Second, studies that analysed data by employing the OLS or 2SLS estimators as highlighted in Table 2.1 suffered the endogeneity problems. It is acknowledged that OLS estimator exists under restrictive assumptions of homoscedasticity, autocorrelation, multicollinearity and normality (Baltagi, 2005; Gujarati & Porter, 2009). Under these restrictive assumptions, the OLS estimator generates biased and inconsistent estimates and attracts the likelihood of reporting spurious results (Bascle, 2008). It is asserted that if OLS estimator is properly handled it can generate consistent parameters.

However, Flannery and Hankins (2013); Wintoki et al. (2012); Wooldridge (2002) argued that the unobserved heterogeneity, simultaneity and dynamic endogeneity constitute the endogenous problems which cannot be controlled by OLS estimator.

Moreover, while the use of 2SLS can help to capture the unobserved heterogeneity through the use of instrumental variables (IV), it has been argued that there is an ambiguity of identifying suitable instruments (Bozec et al., 2010). Moreover, Staiger and Stock (1997); Stock, Wright, and Yogo (2002); Tsionas et al. (2012) added that some instruments are weak especially when they are correlated by regressors. Thus any correlation between IV and regressors will make such instruments to be invalid. In general, 2SLS suffers endogeneity problem because error term is contemporaneously correlated.

Thus, in order to overcome problems of unobserved heterogeneity and endogeneity that were apparent in past empirical studies, the current study employed the dynamic GMM estimator. It is claimed that GMM estimator can generate unbiased and efficient estimates, and also the estimator is attached with valid instrument and lagged dependent variable (Arellano & Bond, 1991; Blundell & Bond, 1998). The dynamic GMM estimator has been acknowledged to be superior to other estimating techniques including OLS, Fixed Effect Model (FEM) and Random Effect Model (REM) (Arellano, 2004; Arellano & Bond, 1991; Keong, 2007; Wintoki et al., 2012; Wooldridge, 2002).

Third, studies that employed unbalanced panel data for instance Huang and Boateng (2013); Vintilă and Gherghina (2014) included in their analysis the companies whose data were missing; as a result, the studies constituted the possibility of reporting biased results. In the contrary, this study employed balanced panel data.

2.9   Summary

This chapter has developed a framework based on the agency theory and resource dependency theory purposely for generating the likelihood of protecting minority shareholders among partner states of the EAC. The interests for all stakeholders can be aligned when the company achieves its predetermined objectives. Empirical studies for ownership structure on firm performance are summarised in Table 2.1. Numerous literature has argued that ignoring endogenous problem create the possibility for reporting spurious results. Thus, employing the dynamic GMM estimator intends to account for problem associated with the omitted variables, instrumental error, simultaneity and dynamic endogeneity. The use of panel data emanates from its proficiency to overcome the shortcomings associated with firm heterogeneity.

Thus, the next chapter provides methodologies for achieving objectives of this study. For econometric issues, panel data are discussed together with panel unit root tests and panel cointegration tests. The chapter will address various issues pertaining to endogenous problems. The DEA technique is discussed and econometric methodology of GMM is discussed.

CHAPTER 3

RESEARCH METHODOLOGY

3.1   Introduction

Studies on ownership concentration and corporate performance relations are progressively conducted in developed economies than in developing economies including EAC. It is widely accepted that corporate governance in developed economies are attached with sound institutional frameworks where management activities can be easily monitored at very low costs (Bajaj et al., 1998; Iskander & Chamlou, 2000). In developing economies including partner states of EAC, studies on ownership concentration and firm performance relations have received insufficient attention.

This study examines the ownership concentrations and firm performance relations in EAC for ascertaining the monitoring and expropriation behaviour by majority shareholders. Moreover, the study integrates the agency and resource dependency theories to examine the role played by foreign ownership when interacted by efficiency scores towards corporate performance and protection of minority shareholders. This study employed the balanced panel data of 58 non-financial publicly listed companies in four security exchanges over the period of 2007-2015.

This chapter is organised in such that subsection 3.2 presents conceptual framework whereby the model for achieving objectives are developed. Subsection 3.3 discusses the Data envelopment analysis technique for developing the efficiency scores. Data and data sources are described in subsection 3.4. Subsection 3.5 analyses the panel unit root tests and panel cointegration tests. Subsection 3.6 provides brief discussion on Fixed and Random effect models, and Generalised Method of Moments (GMM) is discussed under subsection 3.7.

3.2   Conceptual Theoretical Framework

The relationship between ownership structure and firm performance is reflected by developing three models of linearity, nonlinear and the interaction between foreign ownership and efficiency scores in the model. Thus, the theoretical and empirical frameworks are stated in the proceeding subsections.

3.2.1   Theoretical Framework

It was argued in the literature that concentrated ownership can result into linear relationship when concentrated monitoring is imposed by controlling shareholders (Berle & Means, 1933; Stijn Claessens & Djankov, 1999). However, the persistence of monitoring and expropriation creates a nonlinear relationship.

3.2.1.1 Linear Relationship between Ownership Concentration and Corporate Performance

Studies that examined the relationship between ownership concentration and corporate performance among the listed companies in EAC reported inconclusive results (Mang'unyi, 2011; Munisi et al., 2014; Murongo, 2013; Nyaki, 2013; Okiro & Aduda, 2015; Ongore et al., 2011; Tusiime, Nkundabanyanga, & Nkote, 2011; Wanyonyi & Tobias, 2013; Waweru & Riro, 2013).

The inconclusive results on studies carried is contributed by different factors including but not limited to the treatment of ownership concentration as exogenously determined. Demsetz (1983) pointed out that ownership concentration is endogenously determined. More emphasise was given by Gujarati and Porter (2009) that, it is unlikely for a variable to be strictly exogenous while performance depends on the past, current and future values. Therefore, this study treated concentrated ownership as endogenously determined.

According to the convergence effect premises, firm performance and ownership concentrated are positive and statistically significant related (Jensen & Meckling, 1976; Keasey et al., 1994). Empirical evidences by Cho (1998), Himmelberg, Hubbard, & Palia (1999), Yixiang (2011) found a reverse causality between ownership structure and performance whereby ownership was evidenced to be endogenously determined by performance.

Börsch-Supan and Köke (2002) concluded that the reverse causality and spurious correlation are the sources of endogenous problem. They argued that spurious correlation is caused by the presence of unobservable heterogeneity that affects performance and governance concurrently. Similarly, Himmelberg et al. (1999) pointed out that relationship between corporate governance and performance is influenced by some other unobserved/unmeasured factors. Thus, based on the above discussion the linear relationship is measured using the following model.

$$PERF_t = \alpha + \beta_1 X_t + \gamma Z_t + \varepsilon_t \qquad (3.1)$$

Where: $PERF$ = corporate performance; α = constant term; X_t = ownership concentration; β_1 = coefficient for ownership concentration; Z_t = control variables; γ = coefficients for control variables Z_t; ε_t = error term.

3.2.1.2 Monitoring and Expropriation Behaviour by Majority Shareholders

Several studies have reported the presence of nonlinear relationship between ownership concentration and firm performance (McConnell & Servaes, 1990; Mikkelson, Partch, & Shah, 1997; Scholten, 2014; Thomsen & Pedersen, 2000). It is argued that nonlinear relationship occurs when controlling shareholders are triggered by private benefit of control by expropriation at the expense of minority investors (McConnell & Servaes, 1990; Morck et al., 1988; Shleifer & Vishny, 1997). The monitoring and expropriation behaviour

resulted into negative-positive relationships and vice versa (Stijn Claessens, Djankov, Fan, & Lang, 2002; Thomsen & Pedersen, 2000; Torben & Thomsen, 2000).

The outcomes of monitoring and expropriation by majority shareholders deteriorates corporate performance (Miguel, Pindado, & Torre, 2001). It is argued that the correlation between dependent and independent variables signals the convergence interests of all stakeholders when ownership concentration increases. This relationship is established by introducing the quadratic relationship whereby the ownership concentration is squared (Claessens et al., 1999; Huang & Boateng, 2013). The quadratic relationship is presented in eqn. 3.2.

$$PERF_t = \alpha + \beta_1 X_t + \beta_2 X_t^2 + \delta Z_t + \varepsilon_t \qquad (3.2)$$

Where: $X^2{}_{it}$ = squared ownership concentration. Thus given eqn. 3.2, the breakpoint can be identified by taking the first derivative of performance with respect to concentrated ownership and equate equal to zero

$$\frac{\partial(PERF)}{\partial X} = \beta_1 + 2\beta_2 X_t = 0 \qquad (3.3)$$

Hence, the breakpoint is found at $X = \dfrac{-\beta_1}{2\beta_2}$ $\qquad (3.4)$

It is worth to note that, the coefficients β_1 and β_2 have opposite signs.

3.2.2 Development of Empirical Model

This study focused on the internal mechanism of corporate governance because the external mechanism of corporate governance in partner states of EAC are overwhelmed by poor legal and regulatory framework (Munisi et al., 2014; Peng & Jiang, 2010). The relationship between ownership concentration and the corporate performance was established. Weak legal and regulatory framework bestows the ownership and control of the company into the hands of the majority shareholders. The private benefit of control force majority shareholders to exploit company assets at the expense of minority investors. The ownership concentration is the main cause for poor protection of minority shareholders.

Therefore, the first objective of the linear relationship between ownership concentration and corporate performance is achieved through using the following model. Note that equation 3.1 is time series equation. To make this equation a dynamic panel model by including the cross sectional unit i, an estimation model will look as follows.

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \sum_{i-1}^{N} \gamma_i Z_{it} + \varepsilon_{it} \quad i = 1,2,...,N; t = 1,2,...,T \tag{3.5}$$

Where: Y_{it} = corporate performance; β_0 = constant term; X_{it} = ownership concentration; β_1 = coefficient for the ownership concentration; γ_i = coefficient for control variables Z_{it} namely firm size, leverage, investment and growth; and ε_{it} = error term.

79

As cited previously, Demsetz (1983) asserted that corporate performance is affected by endogenous problems. The sources of endogeneity problems are unobserved heterogeneity, simultaneity and instrumental error (Greene, 2014; Wintoki et al., 2012; Wooldridge, 2002). Existing studies admit that ignoring endogenous problems create biased and inconsistent estimates essentially for reporting spurious results (Cho, 1998; Himmelberg, Hubbard, & Palia, 1999; Yixiang, 2011).

As Gujarati and Porter (2009) opined above that, it is dubious to assume that a variable is strictly exogenous while performance depends on the past, current and future aspects. Therefore, this study accounts for endogenous problem by employing the Generalized Method of Moments (GMM). The GMM technique is employed because it can handle endogenous problems (Arellano & Bond, 1991; Blundell & Bond, 1998). Several empirical studies have reported the superiority of dynamic GMM estimator over other estimating techniques including OLS and FEM (Keong, 2007; Wintoki et al., 2012).

Corporate performance can be improved when controlling shareholders play positive monitoring role of the business (Shleifer & Vishny, 1986). However, since 1990s it was discovered that controlling shareholders exercise extensive expropriation by diverting company resources at the expense of minority shareholders (Dalziel et al., 2011; Faccio et al., 2001; Gugler & Weigand, 2003; Johnson, LaPorta, Lopez-de-Silanes, & Shleifer, 2000).

Thus, the monitoring and expropriation effects have possibility of generating nonlinear relationship between ownership concentration and corporate performance. It is asserted that, this effect is common in countries like partner states of EAC where ownership concentration is dominant (Chakra & Kaddoura, 2015; Filatotchev et al., 2013; Nguyen et al., 2015) which in turn manifest poor protection of minority shareholders. Thus, this impact of monitoring and expropriation which creates principal-principal problem is presented using square of the ownership concentration (McConnell & Servaes, 1990; Morck et al., 1988; Shleifer & Vishny, 1997).

It can therefore be stated amenably that the impact of ownership concentration on corporate performance can be unclear when ownership concentration is low and ultimately converts to positive as ownership concentration increases to a certain level and takes a U-shaped relationship (Y. Hu & Izumida, 2008; Nguyen et al., 2015). The U-shaped view holds also the argument that was stated by Law and Azman-Saini (2008) on institutions and financial development.

Therefore, the second objective of monitoring and expropriation behaviour by majority shareholders is examined in nonlinearity relationship by including the squared ownership concentration in the dynamic panel eqn. 3.5 and develops the following model:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it}^2 + \sum_{i=1}^{N} \gamma_i Z_{it} + \varepsilon_{it} \qquad (3.6)$$

Where: X^2_{it} = square ownership concentration. The coefficients β_1 and β_2 carries opposite signs. The squared ownership concentration in eqn. 3.6 implies that when concentration ownership increases the expropriation effect declines following efficient monitoring and the relationship between squared ownership concentration and corporate performance is expected to be positive (Y. Hu & Izumida, 2008; Nguyen et al., 2015).

The EAC region is overwhelmed by weak legal and regulatory frameworks and thus, jeopardises the protection of minority shareholders (Berglöf & Claessens, 2004; Melyoki, 2005). The resource dependence theory (RDT) claims that utilisation of external financing enhances performance (Douma et al., 2006; Hillman & Dalziel, 2003). This theory suggests that the board of directors is required to build international linkage to accessing external sources. In addition, Crook, Ketchen, Combs, and Todd (2008); Dalton, Daily, Certo, and Roengpitya (2003) pointed out that heterogeneous ownership improves monitoring know-how, human capital and financial resources. Thus, different types of ownership are the best alternative sources for protection of minority shareholders in developing countries. Different types of ownership imply existence of heterogeneity among shareholders and thus, the presence of foreign investors in the company provide benchmarking for good governance practices and improve performance.

Based on the above proposition, foreign ownership is accommodated in the dynamic panel equation 3.5 to examine its influencing ability on corporate

performance through monitoring and disciplinary role that address the protection of minority shareholders.

$$Y_{it} = \alpha_0 + \alpha_1 X_{it} + \alpha_2 FO_{it} + \sum \gamma_i Z_{it} + \varepsilon_{it}$$ (3.7)

Where: FO = foreign ownership; coefficient α_2 is expected to be positive. This is the type of ownership where a domestic company constitutes the percentage of foreign investor.

Aggarwal et al., 2011; Young et al., (2008) opined that foreign investors play significant role in mitigating the conflict between principals (horizontal conflict) which is dominant in emerging economies. Foreign investors have acquired management know-how from different countries. Thus, foreign investors can engineer monitoring skills and inculcate transparency among companies for protection of minority shareholders (Aggarwal et al., 2011; Peng & Jiang, 2010). It is widely accepted that foreign institutions are technically more efficient than domestic institutions because of what they constitute (Barney et al., 2001; Douma et al., 2006; Hillman & Dalziel, 2003; Kinda, 2012).

Eqn. 3.7 examines the impact of foreign ownership on firm performance. Foreign ownership promotes firms operating efficiency and in order to measure the operating ability and monitoring role, the interaction between foreign ownership (FO) and firm efficiency (EF) was created. This involved the estimation of efficiency scores using Data Envelopment Analysis (DEA).

This study achieves the third objective by estimating the efficiency scores for public listed companies in EAC using DEA technique. However, the estimation of the efficiency scores for listed firms requires the selection of relevant input and output variables (Ray, 2004; Wagner & Shimshak, 2007). It should be noted that, the third objective intended to measure the technical averages efficiencies for locally owned companies and companies that embrace foreign ownership. This required estimating the average efficiency scores for each year by taking the summation of scores in a particular year and divides it by number of companies. This means that after estimating efficiency score using DEA, then the average scores in each year are estimated using the following formula.

$$\overline{EFF_t} = \frac{\sum_{i,j=1}^{n} EFF_{tij}}{N_{ij}} \tag{3.8a}$$

Where: $\overline{EFF_t}$ is the average efficiency score in a particular year "t", $\sum EFF_{tij}$ is the total efficiency scores in a particular year and N_{ij} is the total number of either i^{th} firms (locally owned companies) or j^{th} firms (foreign owned companies) in a particular year. Detailed information on how to calculate the efficiency scores is presented in subsection 3.3.

The efficiency scores based on DEA were then incorporated by foreign ownership to create interaction term. The introduction of interactive term between foreign ownership and firm efficiency meant to boost foreign ownership with efficiency environment and to capture the disparity impact of foreign ownership on corporate performance (Bürker et al., 2013; Zheka,

2006). Thus, this study achieves the fourth objective by introducing the interactive term in the following model:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 FO_{it} + \beta_3 (FO_{it} * EF_{it}) + \sum_{i=1}^{n} \gamma_i Z_{it} + \varepsilon_{it} \qquad (3.8b)$$

Note that: *FO*EF* is the interactive term, β_3 = coefficient for interactive term which is expected to be positive. The coefficient β_2 is expected to decline in magnitude compared with the previous coefficient of foreign ownership because of impact created by efficiency. However, the coefficient for the ownership concentration β_1 is expected to improve positively.

From eqn. 3.8b, foreign investors played the monitoring and disciplinary roles. The interaction between foreign ownership and efficiency is linked with less information asymmetry by foreign ownership necessarily for standard corporate governance practices (Chen, Ghoul, Guedhami, & Wang, 2014). The positive relationship between the interactive variable and performance is expected. Meanwhile, the introduction of efficiency in the model might decline foreign ownership to negative before bouncing back to positive because of the impact created by efficiency. In case the coefficient of foreign ownership becomes negative, it will imply that there is a certain threshold of efficiency which is required to accelerate optimal performance (Greenaway, Guariglia, & Yu, 2014).

Premised on the above explanations, the threshold value of efficiency score for optimal performance to accelerate foreign ownership on performance can be estimated by differentiating eqn. 3.8b with respect to FO as follows.

$$\frac{\partial Y_{it}}{\partial (FO_{it})} = \beta_2 + \beta_3 EF_{it} \qquad (3.8c)$$

Therefore, at this point it will be necessary to solve for EF in eqn.3.8c at the stationary point whereby at stationary point $\frac{\partial Y_{it}}{\partial (FO_{it})} = 0$, then solve for EF given that β_2 and β_3 will be known.

3.3 Data Envelopment Analysis (DEA) Technique

This study achieves the third objective by estimating the efficiency scores for publicly listed companies in EAC using DEA technique as outlined above. This subsection provides detailed information on how to calculate efficiency scores using DEA.

Literature slightly emphasises on how to choose relevant input and output variables because few studies presume that DEA variables are naturally known. It is extensively accepted that decision making units (DMUs) employ resources in their operations and that outcomes are expected from these resources. Resources employed by firm are referred to as inputs while outcomes are referred to as outputs (Madhanagopal & Chandrasekaran, 2014; Oberholzer, 2014; Wagner & Shimshak, 2007).

Proponents of DEA technique argue that the technique focuses on developing a parsimonious model that uses as many variables as desirable but as few variables as possible. On aggregate, DEA variables should not exceed one third or should be two or three times the sum of DEA variables of the DMUs in the study (Bowlin, 1998; Cooper et al., 2007; Dyson, Allen, Camanho, & Shale, 2001; Golany & Roll, 1989; Jenkins & Anderson, 2003; Olesen & Petersen, 2015; Ramanathan, 2003; Sharma & Yu, 2015).

Given the above understanding, different approaches for selecting rational and relevant DEA variables are offered. These approaches include but not limited to judgmental screening (Golany & Roll, 1989), application of regression and correlation analysis (Jenkins & Anderson, 2003; Lewin, Morey, & Cook, 1982), an iterative technique (Kittelsen, 1993; Pastor, Ruiz, & Sirvent, 2002), the stepwise DEA algorithm (Sharma & Yu, 2015; Wagner & Shimshak, 2007) and the genetic algorithm (Madhanagopal & Chandrasekaran, 2014).

The approaches outlined above provide the benchmark for selecting relevant DEA variables. The challenge is that, criteria applied to any of these approaches are somewhat subjective. However, the proponents of corporate governance and corporate performance studies propose the fixed assets, equity capital, labour, expenses, total revenue and profit as the most relevant DEA variables (Madhanagopal & Chandrasekaran, 2014; Oberholzer, 2014; Wang, Jeng, & Peng, 2007; Zimková, 2014).

Accordingly, this study employed input vectors of fixed assets, staff expenses, and equity capital. Fixed assets are the combination of the tangible and intangible assets because these assets demonstrate the vital for survival of any company. Equity capital is included as one of the factors of production because the capital is raised for expanding the business. Staff expenses which encompass salaries and wages are included as input because expenses are essential during the process of production. In this regard, staff expenses are regarded to be part of costs of doing business.

Two output variables of total revenue and profit are employed. Revenue is included because it is the real value and that management cannot easily manoeuvre operating revenue using earnings (Nanka-Bruce, 2011). Also, profit is included because of its ability to access the efficiency of management to utilise each dollar employed in the firm to generate return (Beveren, 2010; Colombo, Croce, & Murtinu, 2014; Levinsohn & Petrin, 2003; Nanka-Bruce, 2011; Olley & Pakes, 1996; Staal & Brogaard, 2011; Van Biesebroeck, 2007).

It is worth to note that, all DEA variables used in this study are real variables implying that they are adjusted with purchasing power parity (PPP) and exchange rate. This study is in line with previous studies which emphasised for data adjustments (Madhanagopal & Chandrasekaran, 2014; Nanka-Bruce, 2011).

This research uses DEA methodology to compute the efficiency scores of firms which is a fraction of outputs to inputs (Cooper et al., 2007, 2011).

Inputs and outputs data for DMU j are $x_{1,j}, x_{2,j},...x_{m,j}$ and $y_{1,j}, y_{2,j}...y_{s,j}$ respectively (m inputs, s outputs). The VRS is expressed with the efficiency score θ known as a real variable and a non-negative vector variable (Banker et al., 1984).

This study is in line with Farrell (1957) who proposed the use of input oriented because input-oriented can gauge technical inefficiency of some firms in a radial (proportional) decrease in input usage to produce the same level of output (Coelli et al., 2005; Fazli & Agheshlouei, 2009). Moreover, the reason for this study to employ input orientation was triggered by companies to accomplish existing requirements that are mainly decided by the total resources available. Contrary, other companies have fixed amount of resources to be accomplished to achieve maximum output, and it would be logical to employ the output orientation.

Thus, the VRS model developed is as follows:

$$\theta^* = \min \theta$$

Subject to

$$\sum_{j=1}^{n} \lambda_j x_{ij} \leq \theta x_{i0} \qquad i = 1,2,... m;$$

$$\sum_{j=1}^{n} \lambda_j y_{rj} \geq y_{r0} \qquad r = 1,2,... s; \qquad\qquad (3.9)$$

$$\lambda_j \geq 0 \qquad j = 1,2,... n.$$

Thus, eqn. 3.9 is typical a CRS model. Hence, eqn.3.9 is converted to VRS by introducing the convexity constraint which allows an inefficient firm to be

benchmarked against similar firm size. The need to introduce convexity constraint is that it enhances the VRS model to produce efficiency scores that are greater than or equal to efficiency scores generated via the CRS model.

Thus, the constraint that converts the CRS to VRS is denoted hereunder.

$\sum_{j=1}^{n} \lambda_j = 1$: is the convexity constraint. Every time, $x_{ij}, y_{rj} > 0$

Note that x_{i0} and y_{r0} are the levels of ith inputs and r^{th} outputs for DMU_0 respectively, λ_j represents weights for inputs and outputs and n number of firms. $\theta^* =$ technical efficiency of jth DMU such that $0 < \theta^* \leq 1$; 1 implies DMU is technically efficient otherwise the DMU is inefficient (Bonin, Hasan, & Wachtel,2005; Delis & Papanikolaou, 2009; Lu, Wang, Hung, & Lu, 2012; McDonald, 2009; Ramalho, Ramalho, & Henriques, 2010).

3.4   Data type and Data Sources

This study employed firm panel data of 58 non-financial listed firms collected over the period of 2007-2015. The 58 companies were obtained by excluding banks and insurance companies because they have different regulations. The period 2007 is chosen because during this year two countries namely Rwanda and Burundi joined the integration of East African Community (EAC). Moreover, in 2007 the stock markets in the EAC region with exception of Kenya were at their initial stages of establishment. For clarification and more details refer to chapter one, Table 1.2.

During the year 2007, the stock markets in EAC implemented automated trading system (DSE, 2011). Automation was initiated as a means to cut higher running costs and inefficiency that is one of key challenges of most African stock markets and hence facilitate liquidity (Massele, Darroux, Jonathan, & Fengju, 2013; Yartey & Adjasi, 2007). Data source and variables for this study are summarised in Table 3.1.

The scope for this study is the partner states of EAC for reasons that: first, the partner states like other African countries, are dominated by conflict of interest between controlling and minority shareholders which is engineered by weak legal protection of minority shareholders (Ayandele & Emmanuel, 2013; Eyster, 2014; Rwegasira, 2000; Schwab, 2014; Young et al., 2008).

Second, the partner states have established the common union and common market since 2009 and 2010 respectively. The establishment of common market intended to create free competitive environment for companies. The transferability of technology, fiscal policy, capital and labour are among the key issues for the common market. The creation of free competitive environment helps companies to absorb and utilise proper corporate governance practices for efficiency corporate performance.

Third, in connection with the above reasons, in 2014 the partner states signed a protocol of formulating common currency through the monetary union and it is expected to be implemented within ten years. To achieve the monetary policy objective, the EAC has harmonised the macroeconomic policies. The

EAC intends to establish the political federation to facilitate stable country policies and promote strong political stability and enhance cooperation for international integration.

Fourth, the EAC have established the protocol for East African Community corporate governance (EACCG) and have gazetted the guidelines for good corporate governance for publicly listed companies. Therefore, there is a need to assess the current governance towards performance so that the guidelines would facilitate the region to overcome poor corporate governance practices that harm corporate performance.

3.4.1 Panel Data

Baltagi (2005) defines panel data as the pooling of observations on cross sectional of households, firms and country for several periods of time. Panel data can be described as balanced or unbalanced (incomplete) panel data. The balanced panel data occurs when all the observations are available for the entire periods of the study while unbalanced panel data constitutes missing observations of some firms in some periods of the study (Baltagi, 2005; Gujarati & Porter, 2009). This study employed the balanced panel data because the observations cover the entire period of study 2007-2015 and it restricts for new entries to avoid the possibility of reporting biased results.

Previous studies on corporate governance were dominated by time series and cross sectional data. In recent years, literature on corporate governance has

diverged greatly from macro modelling to micro modelling of financing. The use of panel data has surpassed the time series and cross sectional data (Baltagi, 2005; C Hsiao, 2003).

Time series technique is referred to as a technique where data for an individual or unit are collected severally. Observation made on an individual or unit is referred to as single time series or univariate time series. Time series is non-deterministic by nature because it is difficult to predict what will happen in the future while some past patterns will continue to predict the future (Cochrane, 1997). Because time series process depends on the past behaviour of the main variable rather than the explanatory variable, the system is referred to as black box. According to Box and Jenkins, they assert that at least 50 observations are required to perform the time series analysis.

Time series involves collection of the data from an individual or unit over several periods whereas, the cross sectional is data collected from units or individuals at one point time. On the other hand, panel data combines the time series and cross sectional data (Gujarati & Porter, 2009). Therefore, panel data accounts for both time and dimension (Gujarati & Porter, 2009).

The conventional time series has several drawbacks including the problems of autocorrelation. Autocorrelation occurs when the residuals are not independent to each other and its covariance deviates from zero. On the other hand, the cross sectional data regression suffers from heteroskedasticity. Sometimes

panel data are described as pooled data or simply pooling of time series and cross sectional observations, longitudinal data or micro panel data.

3.4.1.1 Advantages of Panel Data

There are several advantages for using panel data over time series and cross sectional data (Baltagi, 2005; Hsiao, 2003).

First, panel data takes into account the heterogeneity among corporations because each firm has specific characteristics. Time series and cross sectional data have shortcoming of developing biased results because they cannot control for heterogeneity among firms (Arellano, 2004). The ability for panel data to control for heterogeneity is important because of firm-invariant or time-invariant. Moreover, when variables that affect performance are omitted or not available in the model, time series and cross sectional data will tend to generate biased estimates.

Second, panel data are superior in controlling for spurious correlation whereby the unobserved or unmeasured factors are controlled draconically and do not appear in the regression model (Bozec, Dia & Bozec, 2010). The third advantage of panel data is its ability to providing more informative data that allow for variability, less co-linearity and creates more degree of freedom and efficiency. Time series data are more affected by autocorrelation and multicollinearity while cross sectional data are affected by heteroscedasticity.

Fourth, while cross sectional data are required to be studied severally, panel data is more suitable for studying the dynamics of change. This means that changes in economic policy are well studied using panel survey. Thus, because corporate performance changes overly so employing cross-sectional data will have greater likelihood of generating biased results.

Another advantage of panel data lies on its flexibility for researchers to construct and test complicated behavioural models including technical efficiency using panel data which cannot be captured using either time series or cross sectional data.

3.4.2 The Research Variables

The empirical models that were developed above have the explanatory variables, dependent variables and control variables. Based on the agency theory and the resource dependency theory, the variables employed are discussed here below.

3.4.2.1 Dependent Variables

This study employed corporate performance as a dependent variable. The predominant measures of corporate performance are accounting and market measures (Munisi & Randoy, 2013). This study considered the market and accounting measures in corporate performance.

The Tobin's Q was the proxy for the market performance, while Return on Assets (ROA) and Return on Equity (ROE) were the proxies for accounting performance (Aliabadi, 2013; Sanjay Bhagat & Bolton, 2009; Delen, Kuzey, & Uyar, 2013; Tayeh, Al-jarrah, Tarhini, & Kingdom, 2015). The accounting measures is based on what has been accomplished by the management (backward-looking) and the market measures is referred to what the management accomplish (forward-looking) (Demsetz & Villalonga, 2001).

The Tobin's Q was introduced by Tobin (1969) to measure the future investment performance of the firm. The model was successful in measuring business performance and thus, it was extended to other studies (Chung & Pruitt, 1994; Davies et al., 2005; Delen et al., 2013; Demsetz & Villalonga, 2001; Lang & Litzenberger, 1989; Lindenberg & Ross, 1981; Oulton, 1981; Smirlock, Gilligan, & Marshall, 1984). However, the Tobin's Q model had undergone several modifications from its complexity to simplicity. For instance, Chung and Pruitt (1994) simplified the complexity algorithm that were earlier proposed by (Lang & Litzenberger, 1989; Lindenberg & Ross, 1981). The complexity for using the original Tobin's Q was associated with data availability especially the replacement cost of assets.

Tobin's Q was explained as the market value of firm's assets divided by the replacement cost (Yermack, 1996). However, this study adopts Tobin's Q based on the equity market value to equity book value which was applied by (Chen, Chung, Hsu, & Wu, 2010; Kang, Wang, Bang, & Woo, 2015; La Porta et al., 2002; Munisi & Randoy, 2013). These authors opined that the modified

96

Tobin's Q model generated good estimate. The higher or lower the Tobin's Q the better or worse the corporate governance mechanism towards firm performance (Davies et al., 2005; Himmelberg et al., 1999; Hsu & Jang, 2009; Kang, Lee, & Huh, 2010).

The accounting ratios are used because market measures rely on expected future performance. Thus, ROA was employed to represent the ability of the company to generate profit from the assets employed. The ROE represented the efficiency of management to generate profit for every dollar invested in the company and it is a useful measure for making comparison with other companies in similar industry (Aliabadi, 2013; Athanasoglou, Brissimis, & Delis, 2005; Bahhouth & Gonzalez, 2014; Chen et al., 2012; Core, Holthausen, & Larcker, 1999; Davies et al., 2005; Ekholm & Maury, 2014; Tavitiyaman, Qu, & Qiu, 2011). Thus, the higher ratio implies that management is effective to utilise scarce resources of the company.

3.4.2.2 Independent Variables

The ownership concentrated is used to measure the influence of majority shareholders towards corporate performance. Several studies that emanated after Demsetz and Lehn (1985) classified ownership concentration based on the clusters of the block holders. Ownership concentration is measured by the sum of shares held by the largest shareholders as the percentage of ownership (Demsetz & Lehn, 1985; Harold Demsetz, 1983; Earle, Kucsera, & Telegdy,

2005). Thus, the sum of the block holders carries significant explanations to measure the impact of the majority shareholders.

Accordingly, foreign ownership as per resource dependence theory in a domestic firms play monitoring role by installing standard corporate governance practices thereby reducing the ability of controlling shareholders to exploit firm's assets at the expense of minority investors (Bjuggren et al., 2007; S. Lee, 2008).

It is argued that,- foreign investors should not be considered as a cure for problems facing developing economies (Chari et al., 2012; Kim, 2010). The finding of Chari et al. (2012) concluded that foreign ownership and corporate governance are positively related. Effect of foreign ownership can be captured using different ways including the use of dummy variables 1 if a firm has offshore owner and 0 otherwise (Mueller et al., 2003). Where, Lee (2008) pointed out that foreign ownership can be measured by the proportion of shares held by foreign investors. This study measures foreign ownership as the percentage of shares owned by foreign investors.

3.4.2.3 Control Variables

Control variables are variables that can influence the relationship between ownership structure and firm performance. The power of control variables is that they have an ability to influence both ownership and corporate

performance but they are uncorrelated with the error term. There are number of reasons for including the control variables.

The first reason is associated with the ability of reducing the biasness effect caused by omitted variables, measurement error and simultaneity. This constitutes the controlling of unobserved heterogeneity and dynamic endogeneity (Hu & Izumida, 2008; Nguyen et al., 2015). Therefore, in order to critically assess the impact of ownership structure on firm performance it is necessary to include control variables (McConnell & Servaes, 1990; Morck et al., 1988; Thomsen & Pedersen, 2000).

The second reason is associated with the absence of the market for corporate control among partner states in EAC which could help to align interests of the managers and shareholders (Demsetz & Lehn, 1985). This study has included firm size, leverage, growth opportunity, and investment as control variables. There are other variables that could be used but those mentioned were identified to carry strong impact for the context of the Sub Saharan countries especially the EAC (Munisi et al., 2014; Munisi & Randoy, 2013). The rationale for including these variables is provided below.

The firm size is included as a control variable because the size of a firm predicts the ability of the firm to access external source of financing. The effect of firm size can be measured when normalised by taking the natural logarithm of total assets of the firm (Core et al., 1999; Fama & French, 2000). This study employed total assets because they are related with total resources

of the firm and the effects of firm size among partner states in EAC are based on the resources of the firm. Extant studies report positive relationship between firm size and corporate performance because of the capability of large firm to exploit economies of scale (Beiner, Drobetz, & Schmid, 2006; Black, Jang, & Kim, 2006b; Munisi et al., 2014). Thus, the proxy for firm size is taken to be the natural logarithm of total assets (S. Lee, 2009).

The leverage is another control variable included in this study because leverage of the company entails its creditworthy. Firms that employ high level of debt are expected to have better performance than non-debt companies. The regions to which protection of minority shareholders is high then leverage positively affect performance (González, 2013). On this regard, the debt issuers impose scrutiny to monitoring the activities of the debt firm while the debt firm will want to keep its reputations. To proxy for leverage, the total debt to total assets is used (Colombo et al., 2014).

Shleifer and Vishny (1997) claimed that the firm that acquires higher debt should work hard in order to avoid the bankruptcy risk. Similarly, Jensen (1986) maintained that the firm that acquires higher debts has minimal agency problems which consequently induce efficiency corporate performance. The signalling hypothesis predicts positive relationship between leverage and corporate performance (Ross, 1977), whereas the pecking order theory predicts negative relationship between leverage and firm performance (Myers & Majluf, 1984; Myers, 1984; Myers, 1977).

The sales growth is another control variable to be introduced because sales growth explains growth opportunities (Black et al., 2006a). This implies that year to year sales growth is an indicative that companies are growing. Studies on corporate governance and performance argue that growth opportunities proved to be the cause rather than the consequences of governance structure (Wintoki et al., 2012). Those companies that admire the fast growing should have the part of their financing from external sources (Durnev & Kim, 2005). Essentially, the efficacy corporate governance should result into lowering the company cost of capital (Beiner et al., 2006).

The sales growth is measured as the percentage change of the current sales to preceding years' sales divided by the preceding years' sales (Durnev & Kim, 2005). Therefore, positive relationship between sales growth and corporate performance is expected (Gompers, Ishii, & Metrick, 2003).

The fourth control variable is investment. This is a macroeconomic variable which can be described as the capital expenditure (CAPEX) of the company. The CAPEX refers to capital expenditure whereby a firm purchases and acquires new properties and equipment for increasing its investments (Arslan, Florackis, & Ozkan, 2014; United Nations, 2010). It is claimed that increasing investment creates multiplier effect on the performance of the firm. The impact of investment on performance offsets myopic insight by managers through long term investments (Samuel, 2000; Stein, 1988, 1989). The expenditure to acquire new investments by firms generates innovative

potentials through R&D which stimulates corporate performance (Durnev & Kim, 2005).

The capital expenditures engineer the prospective future returns of a company and hence coined as the investment opportunity which can be measured as the ratio of capital expenditure to fixed assets. Therefore, capital expenditure and firm performance are expected to be positively related (Akbar, Poletti-Hughes, El-Faitouri, & Shah, 2016; Chen et al., 2010; Lang, Stulz, & Walkling, 1989).

Table 3.1 Summary of Variables and Data Sources

Variables	Description		Source
Dependent variables (Performance measures)			
Tobin's Q (%)	Computed as the market value of assets divided by the book value of assets, where the market value of assets equals the book value of assets plus the market value of common equity less the sum of the book value of common equity.		Bloomberg; Stock Markets of Partner states
ROA (%)	Computed as the ratio of operating profit to total assets.		Bloomberg; Stock Markets of Partner states
ROE (%)	Computed as the ratio of net income to total Equity.		Bloomberg; Stock Markets of Partner states
Independent variables(Ownership structure)			
X	The ownership concentration is the percentage of shares held by the largest shareholder (%).	+, -	Bloomberg; Stock Markets of partner states
FO	Foreign ownership measured by the proportion of shares held by foreign investors (%).	+, -	Bloomberg; Stock Markets of partner states
Control variables			
SIZ	Firm size measured by natural logarithm of total assets	+, -	Bloomberg; Stock Markets of Partner states
LEV	Leverage measured by Book value of Total debts / book value of Total assets.	+, -	Bloomberg; Stock Markets of Partner states

Table 3.1 (continued)

GROW	Growth is measured by average annual growth of sales to the past year	+, -	Bloomberg; Stock Markets of Partner states
INV	The Investment is computed by dividing the CAPEX to Total Assets	+, -	Bloomberg; Stock Markets of Partner states

DEA variables

Inputs (US$ Millions)

Fixed Assets	Combination of tangible and intangible assets but adjusted by PPP and exchange rate	Bloomberg; Stock Markets of Partner states
Expenses	These are real values of staff expenses	Bloomberg; Stock Markets of Partner states
Equity capital	This explains financial capital attributed by the shareholders. Real values are used	Bloomberg; Stock Markets of Partner states

Outputs (US$ Millions)

Total sales	Real values of operating revenue	Bloomberg; Stock Markets of Partner states
Profit	These are net profit at the end of the year. Real values are used.	Bloomberg; Stock Markets of Partner states

Source: Author compilation

It is worth to note that in SSA region including the partner states of EAC, it is somewhat challenging to collect market information data from one source only. Therefore apart from Bloomberg database available at UTAR library, data were also collected from the stock exchanges of partner states of EAC.

3.4.3 Econometric Estimations

This study employed panel data of 58 non-financial public listed companies in EAC over the period of 2007-2015. These data are used to create relationships between dependent and independent variables using GMM. Data are analysed using GMM in order to generate consistent and unbiased parameters and

minimise the likelihood of reporting spurious results. Details for GMM are provided on subsection 3.7.

3.5 Panel Unit Root Tests and Panel Cointegration Tests

This section introduces two panel data models the panel unit root tests and the panel cointegration test analysis. These panel data models are important in regression analysis as described in the specific subsections 3.5.1 and 3.5.2.

3.5.1 Panel Unit Root Tests

3.5.1.1 Overview of Panel Unit Root

Panel unit root tests are intended to examine the data stationarity. The Panel unit root tests are becoming preferred to the standard time series unit root tests because they have greater power compared to low power of time series. The greater power of panel data comes from their data which provide more information on the variations and observations against the conventional time series data (Taylor & Sarno, 1998).

Another referenced advantage of the panel unit root tests over standard time series unit root test is that the panel unit root test has an asymptotic distribution which is normal and standard compared to non-standard limiting distribution of time series data (Barbieri, 2009; Keong, 2007).

The importance for testing stationarity is acknowledged for providing relevant parameters because some variables tend to fluctuate overtime and could trigger reporting spurious results (Gujarati & Porter, 2009; Mahadeva & Robinson, 2004). For instance, Demsetz (1983) argued that factors like firm size, industry classification and shareholder protection contributes to the optimal ownership level to fluctuate overtime. Mahadeva and Robinson (2004) highlighted that if regression is applied to non-stationarity estimates, it could trigger the likelihood of reporting misleading and spurious result. In general, testing for stationarity has an advantage of making accurate predictions.

Numerous studies recognised the growing importance of studies to examine the panel unit root tests in heterogeneous panels (Baltagi & Kao, 2000). Testing for unit root in time series data has been a normal phenomenon but now the unit root tests are conducted in panel data where data are assumed to be heterogeneous (Gujarati & Porter, 2009; Hsiao, 2003). The reasons for testing for data stationarity are to assess if the ups and downs of data are permanent or temporary. The ups and downs have to be known because of their impacts in making forecasting.

The validity for panel unit root tests lies on their size and power they provide when explaining and reporting results. The size of panel unit root tests dictates the level of the probability to commit type I error, whereas the power dictates the probability of committing type II error (Baltagi, 2005; Gujarati & Porter, 2009). For instance, Hurlin and Mignony (2007) observed that the unit root test has lower power in a small sample size which becomes difficult to

differentiate the persistence of stationary series or non-stationary series. Moreover, Baltagi and Kao (2000) pointed out that the lower power problems can be overcome by increasing the number of observations. However, Maddala (1999) criticised the relevance of comparing powers between tests that results from different null hypotheses.

The time series unit root test and panel unit root test are distinguished on the basis of the heterogeneity, cross sectional dependence and small sample biasness (Hurlin & Mignony, 2007; Keong, 2007). Heterogeneity is not a problem for the time series because individuals are assumed to be homogeneous. Panel data assume that individuals are dynamic so the panel unit root test should take into account of the heterogeneity (Hsiao, 2003; Keong, 2007; Moon & Perron, 2004; Pesaran & Smith, 1995).

The panel unit root tests are classified as either first generation or second generation. The first generation of the panel data unit root tests are based on the assumption that data are independent and identically distributed (i.i.d) across firms. Thus, the first generation restricts all cross sectional to be independent that is no cross - sectional correlation in panels whereas the second generation requires all cross sections to be dependent, that is, there is cross - sectional correlation in panels (Barbieri, 2006). The second generation assumes that the correlation across units constitutes nuisance parameters. Explicitly, the distinction between first and second generations of panel unit root tests is in Figure 3.1.
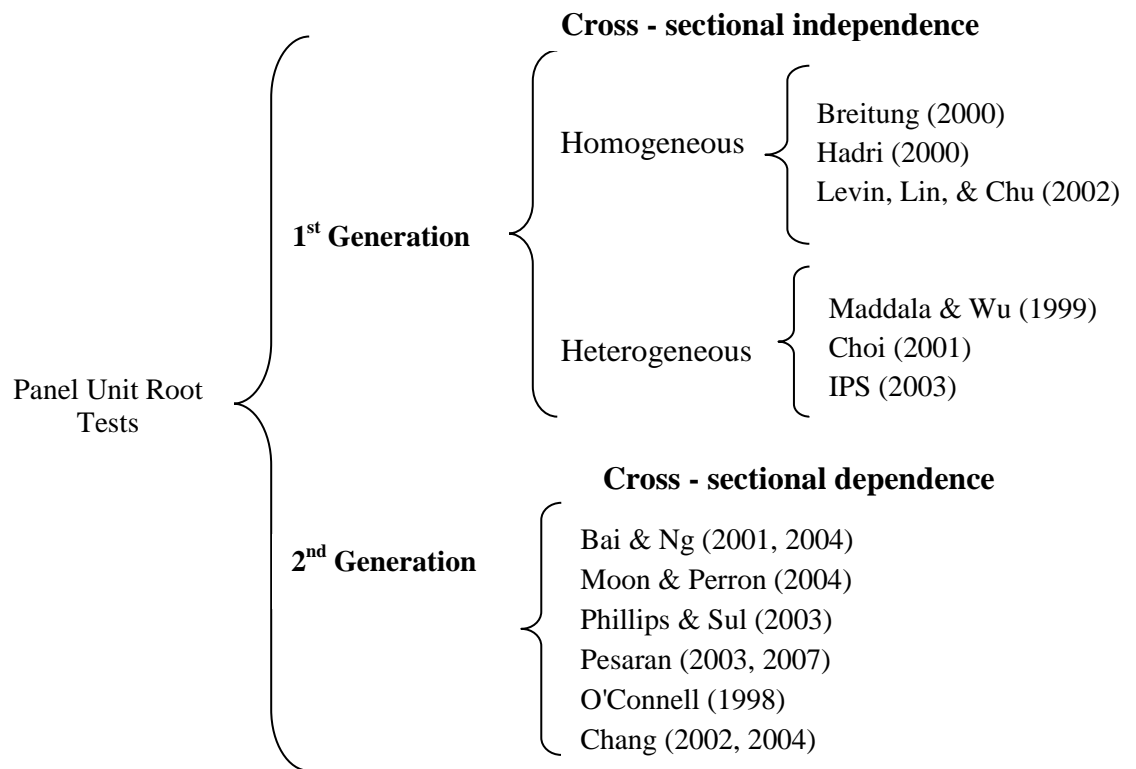
Figure 3.1: Panel Unit Root Tests
Source: Author compilation

The second generation was criticised for its lack of natural order that results into inefficient estimators (Quah, 1994). It was also critiqued for creating less efficient parameters and it becomes spurious when pooled OLS is used to estimate the panel regression on cross sectional dependence (Phillips and Sul, 2003). The cross sectional dependency has greater impact when sample size is small because it makes the unit root test to have less power. In order to increase the power of the test there is a need to increase observations (Baltagi & Kao, 2000). It is worth to note that the cross-sectional correlation dependence is still under development (Barbieri, 2006).

To account for the three issues of dynamic panels as mentioned above, Phillips and Sul (2003) developed asymptotic theory that tests for coefficients of heterogeneity and proposed the Modified Hausman test to account for homogeneity. These authors, proposed the use of median unbiased estimator to tackle the problem of small sample biasness, but the procedure was used to provide benchmark for other complex models such as corrected IV/GMM (Hahn & Kuersteiner, 2002; Hsiao & Zhang, 2015).

However, the issue of heterogeneity is one of the advantages of panel data as it benefits from pooling during panel regression despite that it can generate misleading outcome and invalidate inferences (Keong, 2007). Thus, carefulness is required whenever one intends to use the second generation for cross sectional dependence in testing homogeneity in non-stationarity panels because of its shortcomings as narrated above.

3.5.1.2 The Panel unit root tests Methodology

It was mentioned earlier that there are two types of panel unit root tests. These panel unit root tests are classified as common roots and individual roots. Common roots are based on homogeneity of the autoregressive coefficients, whereas individual roots are based on heterogeneity of the autoregressive coefficients. However, given the individual firm differences, heterogeneity is vital issue to be addressed whenever addressing the panel unit root tests (Hsiao, 2003). The seminal paper by Levin and Lin (1992, 1993), LL and Levin, Lin, and Chu (2002), LLC thereafter restrict coefficients to be

homogeneous. This implies that individuals have similar rate of convergence. The restrictive assumptions made on alternative hypothesis of LL and LLC about homogeneity is unrealistic because it distorts size and lowers the power (Maddala & Kim, 2002). It was this restrictive assumption that led for development of heterogeneous based models (Baltagi, 2005). The heterogeneity models include those developed by Choi (2001); Hadri (2000); Im, Pesaran, and Shin (2003); Maddala and Wu (1999).

Premised on the above discussion and the summarised Fig.3.1, this study employed three panel unit root tests that are capable of accounting for heterogeneity among firms in EAC. These models are the Im et al. (2003) thereafter IPS and the method of combining p-value tests thereafter Fisher-ADF of Choi (2001); Maddala and Wu (1999). The general structure of panel unit root test that will be considered takes the following form.

$$\Delta y_{it} = \rho_i y_{i,t-1} + \sum_{l=1}^{\rho_i} \theta_{il} \Delta y_{i,t-l} + \alpha_i d_{it} + \varepsilon_{it} \qquad (3.10)$$

Where d_{it} is the deterministic component, α_i is the corresponding coefficient, $i =1, 2…$N and $t =1, 2...$ T; ρ_i is a coefficient of lagged dependent variable or autoregressive coefficients; ε_{it} is error term that is idiosyncratic residual.

3.5.1.2.1   The Im, Pesaran and Shin (2003) Panel Unit Root Tests

The IPS test is regarded as the simplification of the LL test because it is viewed as a test that combines evidences from several independent unit root

109

tests. IPS has overcome shortcoming of LLC (Barbieri, 2006). The IPS is based on the assumptions that companies are heterogeneous and they are independent. This test is well known as (Im et al., 2003) that allows for heterogeneity in autoregressive parameter ρ_i which is contrary to (Levin et al., 2002) who have restrictive hypothesis that the autoregressive coefficient ρ_i are homogeneous, implying that all individuals are assumed to have homogeneous autoregressive coefficients. Thus IPS (1997, 2003) test is the generalization of the LL test because is more powerful. The IPS can be argued as follows:

$$\Delta y_{it} = \alpha_{it} + \rho_i y_{i,t-1} + \sum_{t=1}^{\rho_i} \theta_{i,l} \Delta y_{i,t-1} + \varepsilon_{it} \tag{3.11}$$

The null hypothesis is defined as:

$$H_0 : \rho_i = 0 \,;\; \forall_i = 1, 2 \ldots \text{N} \tag{3.12}$$

The alternative hypothesis is defined as follows:

$$H_1 : \rho_i < 0 \;\; i = 1, 2 \ldots N_1 \,; \text{ and,}$$

$$H_1 : \rho_i = 0 \;\; i = N_1 + 1, \ldots, N \,, \text{ with } 0 < N_1 \le N \tag{3.13}$$

The alternative hypotheses allow some individual series to have a unit roots. The IPS t − bar statistic is averaged based on Augmented Dickey - Fuller (ADF) statistic by assuming $t_{iT}(\rho_i, \beta_i)$ with $\beta_i = (\beta_{i,1}, \ldots, \beta_{i,\rho_i})$ denote for t − statistic for testing unit root in the ith company, where

$$\bar{t}_{NT} = \frac{1}{N} \sum_{t=1}^{N} t_i T(\rho_i, \beta_i) \tag{3.14}$$

Constrained with the restrictive assumptions that requires all cross sections to be independent then $\bar{t}_{NT} \to N(0,1)$ as $T \to \infty$ and as when $N \to \infty$ based on Lindberg – Levy central limit theory.

For standardization of IPS based on ADF, estimations of expected value and variance of t-bar statistic have to be calculated, that is $E(\bar{t}_{iT}(\rho_i, \beta_i))$ and $Var(\bar{t}_{iT}(\rho_i, \beta_i))$ values. Therefore, because of standardization, IPS converge to a standard normal distribution under a null of non-stationarity

$$\overline{W}_t = \frac{\sqrt{N}\left(\bar{t}_{NT} - \frac{1}{N}\sum_{i=1}^{N} E(t_{iT}(\rho_i, 0)|\rho_i = 0)\right)}{\sqrt{\frac{1}{N}\sum_{i=1}^{N} \mathrm{var}(t_{iT}(\rho_i, 0)|\rho_i = 0)}} \xrightarrow[T,N\to\infty]{d} N(0,1) \tag{3.15}$$

Where: the values $E(t_{iT}|\rho_i = 0)$ and $Var(t_{iT}|\rho_i = 0)$ are calculated by IPS using simulations using different values of T's and $\rho_i's$.

3.5.1.2.2 Fisher – ADF Tests

The IPS performed the Monte – Carlo Simulation to test the power of their own IPS test and Levin and Lin (LL) tests on an assumption that all cross sections are independent. The IPS test was found to be more powerful than LL. The comparison simulation test on three tests of IPS, LL and MW that was conducted by Maddala and Wu (1999), MW hereafter based on the assumption that all cross sections were dependent, which resulted into worse LL test. MW argued that these tests can not rescue the PPP because of their

lower power. The combining P – value tests is the test statistic suggested by Maddala and Wu (1999) which was later expanded by Choi (2001) based on the Fisher (1932) type test.

The starting point for this test is based on the same heterogeneous assumption as IPS model eqn. 3.11, with the same null and alternative hypotheses. This test statistics is based on the observed significance level and assumption that there is a unit root test static and the test statistics are continuous and the corresponding p - value denoted by p_i are uniform (0, 1).

Based on the restrictive assumption that all cross sections are independent, (Maddala & Wu, 1999) and (Choi, 2001) proposed the following Fisher type test

$$P = -2\sum_{i=1}^{N} \ln p_i \qquad (3.16)$$

Eqn. 3.16 combines the p – value of each unit root from each cross section i to test for a panel unit root and P is distribute at chi – square distribution with 2N degree of freedom as $T_1 \rightarrow \infty \ \forall N$, to control for large N samples, (Choi, 2001) proposed the modified P statistic standardized

$$Z = \frac{\frac{1}{\sqrt{N}} \sum_{1}^{N} (-2\ln \rho_i - 2)}{2} \qquad (3.17)$$

(Choi, 2001) argued that the combining p – value provided results that were in favour of PPP contrary to IPS because the combined test had an added

improved predetermined sample power. The power of Z test was three times more than the IPS test (Baltagi, 2005).

3.5.1.3 Conclusion for the Panel Unit Root Tests

The analysis above has identified two categories of panel unit root tests namely; those based on homogeneity assumptions and heterogeneity assumptions. However, this study analyses the listed companies in East African countries which have different (heterogeneity) characteristics. The LL(S) and IPS have the same null hypothesis of unity root, but different alternative hypothesis. The LL(S) is based on homogeneity of autoregressive coefficients and data are based on pooled regression whereas IPS is based on heterogeneity of autoregressive coefficients and does not require pooling of the data but on the mean of the Augmented Dickey Fuller statistic. The MW and IPS are preferably used because they have higher power and size tests compared to LLC (Maddala & Kim, 2002).

3.5.2   Panel Cointegration Tests

3.5.2.1 Introduction

Cointegration tests aims at establishing the existence of long–run relationship between ownership structure variables and firm performance. It was stated earlier that panel data favours the heterogeneity nature of individual firms.

3.5.2.2 Cointegration Tests

It is argued that if data are stationary it implies that they are cointegrated (Lee & Lin, 2010). Thus, cointegration tests justify for long-run relations among variables. The notable tests for measuring the panel cointegration include Kao (1999) and Pedroni (2004) which are residual based test statistics using the null hypothesis of no cointegration. Table 3.2 outlines features of two tests.

Table 3.2: Panel Cointegration Tests

Test	Hypothesis test	Model specification	Properties
Kao (1999)	H_0: no cointegration H_1: Homogeneous	• Varying intercepts • Common slopes • LSDV estimator	• They are residual based tests • They are DF and ADF type tests • They have standard normal limiting distribution • Low power when N and T are small • When $T < 10$, and N large all tests have large size distortion and low power.
Pedroni (2004)	H_0: no cointegration H_1: Heterogeneous	• Varying dynamics • Heterogeneous fixed effect • Heterogeneous trend terms	• They are residual tests • They have standard normal limiting distribution • For $T>100$ all tests have the same power • For $T<20$, group t-statistics are most powerful

Source: Author compilation

This study presumes that firms are heterogeneity. It employed the Pedroni panel cointegration tests because of heterogeneity assumption on the alternative hypothesis contrary to Kao panel cointegration that is based on homogeneity assumption. Pedroni (2004) introduced seven tests as presented in Table 3.2 which allow heterogeneity of the intercept and slope of the cointegration model. Also the tests take into account of the common time factors (within dimensions) and allow for heterogeneity across countries

(between dimensions) using estimated residuals. The Pedroni model includes individuals fixed specific effects and time trends regression.

3.6   The Fixed Effect and Random Effect Models

3.6.1   Introduction

Basically, panel data are of two types namely fixed effect method (FEM) and random effect model (REM). These differ on how heterogeneity is captured and the estimation technique used in each model. This section draws the facts about FEM and REM that justify undertaking the GMM estimator.

3.6.2   The Fixed Effect Model (FEM)

The FEM model, estimate variables using the Ordinary Least Square (OLS) and assumes that the heterogeneity (individual firm effects) can be captured using only an intercept term, and that the heterogeneity is associated with regressors on the right hand side (Gujarati & Porter, 2009). The FEM model is basically described using an intercept and slope.

The FEM assumes that different firms have different intercepts but each firm intercept does not vary overtime (time – invariant), at the same time the slope of each firm does not vary overtime. This situation can be interpreted using the following equation:

$$Y_{it} = \beta_{1i} + \beta_2 X_{2it} + \beta_3 X_{3it} + u_{it} \qquad (3.18)$$

Where the subscript i on the intercept β_{1i} ($i = 1,2,3...n$) suggests that there are

different firms and each firm have different intercept accounted for by

differences in management style, philosophy or employment of new

technology (Gujarati & Porter, 2009); Y_{it} represents dependent variable where

i = entity and t = time; X_{it} represents explanatory variables, u_{it} represents an

error term. In case equation 3.18 was to be written as β_{1it}, it would mean that

the intercept for each firm would change over time, that is, time – variant. The

term fixed effect is applied here to imply that intercepts of individuals are time

– invariant $\beta_1, \beta_2, \beta_3,...$, are coefficients or slopes of the explanatory variables

and are constant meaning that they are time invariant.

Second, to insure that fixed effect intercepts vary over time, dummy variables

should be introduced in the model using the differential intercept dummy

technique to formulate a least square dummy variable (LSDV) model. For

instance if there are 4 individuals that is N = 4, then the model looks as

follows:

$$Y_{it} = \alpha_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha_4 D_{4i} + \beta_2 X_{2it} + \beta_3 X_{3it} + u_{it} \qquad (3.19)$$

Where: $D_{2i} = 1$ for individual 2, 0 otherwise; $D_{3i} = 1$ for individual 3, 0

otherwise; $D_{4i} = 1$ for individual 4, 0 otherwise. $\alpha_2, \alpha_3, \alpha_4$: are coefficients

attached to dummy variables called the differential intercept coefficients. They

are called so because these coefficients provide information by how much the

value of the individual indicated by 1 differs from the intercept coefficient of

the reference individual (Gujarati & Porter, 2009). So, α_2 tells by how much individual 2 differs from the benchmark and thus $\alpha_1 + \alpha_2$ will be the real intercept for individual 2, other intercepts are computed the same way.

Equation 3.19 involves 4 individuals, but only three dummy variables are introduced in the model i.e. always we consider the $m-1$ rule. This helps to avoid falling into the dummy-variable trap or avoid falling into perfect collinearity simply perfect multicollinearity whereby any individual is treated as a benchmark or reference and every time when a dummy variable is introduced, the intercept must be dropped in order not to fall into the dummy-variable trap.

Third, the previous equation 3.19 is called one way fixed effect because it allowed for individual effect to occur and introduced the dummy variables. But again some factors such as technological changes, and external effects might be responsible for changes to occur over time. Thus, time effects can be captured by introducing time dummies in the model as follows:

$$Y_{it} = \alpha_1 + \alpha_2 D_{2i} + \alpha_3 D_{3i} + \alpha_4 D_{4i} + \beta_2 X_{2it} + \beta_3 X_{3it} + \gamma_1 D_{2i} X_{2it} + \gamma_2 D_{2i} X_{3it} + \gamma_3 D_{3i} X_{2it} + \gamma_4 D_{3i} X_{3it} + \gamma_5 D_{4i} X_{2it} + \gamma_6 D_{4i} X_{3it} + u_{it}$$

(3.20)

Eqn. 3.20 allows for both individual and time effects and is termed as a two way fixed effect model resulting into 6 more variables. The number of interactive terms should equal the dummy variables times the number of explanatory variables. It is worth to note that when the number of dummy

variables become too many in the model, the degree of freedom become too low and hence increases the risk of multicollinearity (Gujarati & Porter, 2009).

In general, by combining both individual effects and time effects, more complications arise. Thus, the error term u_{it} should be reflected on the assumptions and issues of heteroscedasticity and autocorrelation be considered.

3.6.3   The Random Effect Model (REM)

Contrary to the FEM model, the estimation of Random Effect Model (REM) is by the Generalised Least Square (GLS) and it is used when FEM fails. REM assumes that individual effects are captured by an intercept and random error. The error term here is independent with the regressors and REM is so referred to as error component model (Gujarati & Porter, 2009).

The rationale behind the REM model is that unlike the FEM, the unobserved effects are assumed to be random and uncorrelated with the regressors; this is most important prediction because the biggest drawback of REM model is the biasness of estimate. REM allows for time invariants that are absorbed by intercepts in the FEM. The ECM is formulated from equation 3.18 but now the intercept β_{1i} is assumed to be random with mean value expressed as follows.

$$E(\beta_{1i}) = \beta_1 \tag{3.21}$$

And intercept value for individual company i can be expressed as follows.

$$\beta_{1i} = \beta_1 + \varepsilon_i \quad i = 1,2,3,...,N \tag{3.22}$$

Where $E(\varepsilon_i) = 0$ and $Var(\varepsilon_i) = \sigma_\varepsilon^2$

$$\tag{3.23}$$

Substituting equations 3.18 and 3.21 we obtain

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_i + u_{it} \tag{3.24}$$

$$Y_{it} = \beta_1 + \beta_2 X_{2it} + \beta_3 X_{3it} + w_{it} \tag{3.25}$$

Such that:

$$w_{it} = \varepsilon_i + u_{it} \tag{3.26}$$

Where: ε_i = cross section, error component, u_{it} = idiosyncratic error which is the combination of time series and cross section error component. In this case, w_{it} is not correlated with any explanatory variable in the model. The component of the error terms is what makes the Random effect model referred to error component model (ECM).

It should be noted that under the FEM, each cross sectional unit has its own fixed intercept value and produces unbiased estimates for β although can be subjected from high sample to sample variability. The ECM, the intercepts represents the mean value of all the intercepts and the error component and that can be biased to estimates of β. The difference between FEM and REM is summarised in Table 3.3.

Table 3.3 Differences between FEM and REM

	Fixed Effect Model	Random Effect Model
Functional form	$Y_{it} = (\alpha + u_i) + X'_{it}\beta + v_{it}$	$Y_{it} = \alpha + X'_{it}\beta + (u_i + v_{it})$
Assumption	-	Individual effects are not correlated with regressors
Intercepts	Varying across group and/or time	Constant
Error variances	Constant	Randomly distributed across group and/or time
Slopes	Constant	Constant
Estimation	LSDV, within effect estimation	EGLS – Estimated Generalized Least Square
Hypothesis test	F test	Breusch-Pagan LM test

Source: Author compilation

These two techniques FEM model and REM model have shortcomings that should be addressed. Studies that applied the fixed and random effect model to establish the relationship between corporate governance and firm performance encountered the endogeneity problem (Demsetz & Lehn, 1985; Demsetz & Villalonga, 2001; Himmelberg et al., 1999). Endogeneity is the main problem facing both the FEM and the REM. The GMM system is introduced to take into account the shortcomings of FEM and REM.

3.7   The Generalised Method of Moments (GMM)

3.7.1   Overview of GMM

The generalised method of moments (GMM) is an estimation model that was formalised by Hansen (1982) to give a non – parametric approach for deriving efficient estimators. The GMM is argued to be an advanced approach for constructing meaningful relationship between corporate governance and firm performance (Schultz, Tan, & Walsh, 2010).

In many studies, the relationship between dependent and independent variables is performed using the OLS that require researchers to take into account the assumptions underlying the residual values including multicollinearity, autocorrelation and homoscedasticity based on Gauss – Markov Theorem (Greene, 2014; Gujarati & Porter, 2009; Wooldridge, 2002).

It is argued that OLS generates biased and inconsistent estimates especially when there is endogeneity problem which occurs when residuals are correlated with the regressors Wooldridge (2002). This implies that the presence of endogeneity violates the condition of exogeneity caused by omitted variables, measurement error and simultaneity causality (Bascle, 2008).

Studies that employed the fixed effect model (FEM) like (Earle et al., 2005; Vintilă & Gherghina, 2014) have greater chance of encountering problems of simultaneity, measurement error and unobserved heterogeneity. This is because when the FEM stands alone cannot handle endogeneity problems and thus, biased estimates is generated (Baltagi, 2005). In this regard, the FEM model should be accompanied by many instrumental variables (IV) in order to overcome correlation between regressors and error term.

However, Bozec et al. (2010); Bozec and Dia (2012) cautioned that the inclusion of many IV in the FEM model leads to a problem of identifying valid instruments that can impact dependent and independent variables. Moreover, Roodman (2009) added that using too many instruments can generate significant sample biasness this is because instrumental variables are

described of having inability to exploit all information available especially on small sample size. (Bascle, 2008) argued for upgrading to GMM in order to create efficient and unbiased parameters.

3.7.2   The Advantages of GMM

This study employed the generalized method of moments (GMM) estimator to analyse the impact of ownership structure on corporate performance for the panel data of 58 non-financial listed companies among partner states in EAC. The use of GMM estimator roots on its superiority compared to other panel data models. The GMM estimator has the following advantages.

First, GMM estimator helps to account for the potential sources of endogeneity which cannot be controlled by FE and REM (Arellano & Bond, 1991; Blundell & Bond, 1998; Pham, Suchard, & Zein, 2011; Schultz et al., 2010). Thus, GMM can account for unobserved heterogeneity, causality effect and simultaneity. Hence, it allows the prevailing corporate governance to be subject of the past performance namely the dynamic endogeneity. More importantly, GMM estimator allows the past firm performance to be used as instrumental variable Thomsen and Pedersen (2000); Wintoki et al. (2012).

Second, it was stated earlier that instrumental variables cannot absorb advantages of exploiting information available in the sample data because these instruments should not be correlated with the residuals. The GMM does the reverse of the IV which is sufficient for generating efficient estimates

(Arellano & Bond, 1991). Therefore, the dynamic GMM estimator can generate efficient estimators for reporting unbiased results. Keong (2007); Wintoki et al. (2012) added that the GMM generates efficient estimates while controlling for endogenous problems.

Third, the GMM estimator is consistent even when the sample size is small. When a series is moderately or highly persistent, the GMM presents low bias and produces efficient estimates. The efficiency of GMM over other estimators such as OLS was reported by (Blundell & Bond, 1998) on the superiority and the accuracy they gain under the small sample size.

3.7.3   The Application of GMM Model

To address the problem of endogeneity that cannot be captured by the FEM and REM, the literature on dynamic panel data model (Arellano & Bond, 1991; Blundell & Bond, 1998) insists on applying the GMM. The rationale for applying the GMM estimator focuses on improving the OLS – Fixed Effect Model estimates by allowing the past performance to explain the current corporate governance. This means that the past performance is used as an instrument to account for simultaneity unlike the OLS or the traditional FEM.

The effect of ownership on firm performance under the restrictive assumption of firm heterogeneity can be presented using dynamic panel data (DPD) model as recommended by Arellano and Bond (1991).

$$Y_{it} = \alpha + k_p y_{it-1} + \beta_i X_{it} + \gamma_i Z_{it} + \lambda_i + \varepsilon_{it} \qquad (3.27)$$

Where: Y_{it} is firm performance for firm i at time t, y_{it-1} is the lagged firm performance, X_{it} explanatory variables, Z_{it} are control variable, β_i and γ_i are vector coefficients for explanatory and control variables respectively, λ_i firm level fixed effect and ε_{it} the error term.

Eqn. (3.27) renders one source of endogeneity known as simultaneity that occurs when $E(\varepsilon_{it}|X_{it}, Z_{it}) \neq 0$. Simultaneity is a situation that occurs when explanatory variables and dependent variable are reversely determined. This suggests that ownership and performance influence one another. The possible way to handle simultaneity problem is to apply simultaneous equations. The literature suggests that at least one of the control variables should not alternate into other equations because of a need to identify exogenous variables. However, Gujarati and Porter (2009) argued that it is improper and unrealistic to assume that a variable is strictly exogenous while the variable depends on the past, current and future values of the error term. Indeed, it is not easy to identify the true instruments (Tsionas et al., 2012).

Moreover, another source of endogeneity problem is unobserved heterogeneity which occurs when $E(\lambda_i|X_{it}, Z_{it}) \neq 0$. The unobserved heterogeneity occurs when firm specific characteristics correlate with the endogenous regressors to affect performance. Firm specific characteristics include managerial ability and company philosophy that impacts corporate performance (Demsetz, 1983;

Hermalin & Weisbach, 2003). Thus the OLS traditional fixed effect regression cannot account for the fixed part of unobserved heterogeneity and thus why Wooldridge (2002) pointed that there will be potential bias and inconsistence in reporting results.

Thus, the above endogenous problems can be controlled by employing the GMM estimator that generates consistent and unbiased estimates. The GMM estimator is argued to be superior in controlling unobserved heterogeneity, simultaneity and past performance known as dynamic endogeneity (Y. Hu & Izumida, 2008; Nguyen et al., 2015). Thus, from eqn. 3.30 the first differenced model is introduced underneath.

$$\Delta Y_{it} = k_p \Delta y_{it-1} + \beta_i \Delta X_{it} + \gamma_i \Delta Z_{it} + \Delta \varepsilon_{it}$$

(3.28)

Where $p > 0$, and Δ is an operator for the first difference. The first difference eliminates the constant term and firm specific effect that is fixed effect based on the time invariant and unobserved heterogeneity. The lagged performance in eqn. (3.28) is an instrument where GMM should be used to estimate the lagged performance as an instrumental variable (Arellano & Bond, 1991; Harold Demsetz & Villalonga, 2001).

Thus, the past performance is used to explain the current performance. In order for this instrument to be valid it is required not be correlated with the disturbance term but correlated with regressors. These instruments by their nature are assumed as weak instruments (Tsionas et al., 2012). An instrument

is said to be weak if it is weakly correlated with the regressors and uncorrelated with the residuals. In the same vein, for an instrument to be valid it should be exogenous (Stock et al., 2002).

However, in a case where correlation between the instrument variable and the unobservable firm specific effect ($E(\Delta y_{it-1}, \Delta \varepsilon_{it}) \neq 0$) exists, then it is required again to take a first difference of eqn. (3.28). It is worth to note that the instrumental variables are components of the GMM estimator.

3.7.4 Research Instruments

3.7.4.1 EViews 9

This study employed the Econometrics Views (EViews 9) to run and execute this quantitative study. According to Bossche (2011), EViews is a statistical software package for establishing relationship between variables in regression analysis. It is also used for making forecasting. It is powerful software because of its ability in handling time series, cross sectional and panel data. EViews offers useful data management, high quality graphics and tabular models outputs, model specification, the estimation output and fitted values and residuals (Bossche, 2011). In terms of inputs and outputs, EViews support numerous formats including Excel, SPSS, SAS, and STATA.

3.7.4.2 Efficiency Management System (EMS) Software

This study employed Efficiency Management System (EMS) software for computation of efficiencies based on DEA technique. The EMS software was developed at the University of Dortmund, Germany and the software free for academic society.

Several software for DEA computations are available including but not limited to Data Envelopment Analysis (Computer) Programme (DEAP) that was developed at the University of New England, Australia. The DEAP software is a DOS based computer program and requires creating many and complex files which results into taking longer time for DEA computations. Moreover, General Algebraic Modelling Systems (GAMS) software was developed to deal with large and complex problems. Thus, GAMS software operates when it is incorporated with a solver. However, GAMS software does not have the command to allow the computation of linear programming to be repeated severally as the requirement for DEA computation (Ramanathan, 2003).

Accordingly, EMS software is chosen because it does not limit the number of Decision Making Units (DMUs) and it handles multiple inputs and outputs. The developer of the EMS software affirms that up to 5,000 DMUs and 40 inputs and outputs can be handled. Moreover, EMS software does not limit the size of computation analysis and thus the size of analysis is judged by the memory of the user's computer. Furthermore, the EMS software accepts data that are in MS Excel or text format and therefore can perform repeated linear

programming that are required for DEA computation (Avkiran, 2006; Ramanathan, 2003).

3.8   Summary

This chapter has highlighted the procedures for achieving the objectives. The chapter has pointed out the importance for testing data stationarity and long run relationship. Econometric estimations for this are based on the heterogeneity among the partner states of EAC. Because of the existing firm specific characteristics, this study accounts for endogenous problems by employing the GMM estimator.

The next chapter provides the discussion of the findings. In general, it provides the implication of the results and assesses the achievability of the objectives.

CHAPTER 4

EMPIRICAL FINDINGS AND DISCUSION

4.1   Introduction

The focus of this chapter is centred on the empirical results and discussion of stationarity, long run relationship of ownership structure and performance for publicly listed companies among partner states in EAC. The econometric estimations are offered on the basis of brief discussion presented in chapter three. These results are organised in subsections where subsection 4.2 summarises the descriptive statistics of this study; subsection 4.3 offers the panel unit root tests and the panel cointegration tests; subsection 4.4 presents and discusses the estimates of the dynamic panel model and the efficiency scores and subsection 4.4 summarises the whole chapter.

4.2   Descriptive Statistics

This section reports the descriptive statistics of this study. It highlights mainly the level of ownership concentration in the EAC region. The results for descriptive statistics are presented in Table 4.1.

Table 4.1: Descriptive Statistics

Variable	ROE	ROA	Tobin's Q	X	FO	TE	SIZ	LEV	INV	GROW
Mean	12.02	20.07	13.93	51.41	11.43	40.42	18.06	14.71	13.83	7.82
Median	8.72	15.06	8.33	55.15	24.92	44.88	17.99	5.62	11.01	5.19
Maximum	67.24	531.55	28.64	93.69	98.17	70.84	21.96	108.84	72.32	227.48
Minimum	-55.7	-462.9	0.11	15.49	0.01	0.07	13.24	0.22	0.04	-66.62
Std. Dev.	16.39	67.32	1.91	1.51	8.05	11.69	1.70	21.82	11.82	25.80
Skewness	0.09	2.34	6.98	0.28	0.23	-1.27	-0.10	2.39	1.65	1.84
Kurtosis	2.13	29.46	85.30	60.05	113.05	1.38	-0.19	5.00	3.83	12.38
Observations	522	522	522	522	522	522	522	522	522	522

Source: Author computation

The notation: ROE = Return on Equity (%), ROA = Return on Asset (%), X = Ownership concentration (%), FO = Foreign ownership (%), TE = Technical efficiency (%), SIZ = Firm size (US$ Million), LEV = Leverage (%), INV = Investment (%), GROW = Sales growth (%).

Table 4.1 summarises the statistics for the variables of this study. This study has 522 observations associated with 58 non-financial listed companies among partner states of EAC over the period of 2007-2015. This size of observations is generous to provide brief status of listed companies in EAC to contribute towards the value added products essentially for the economic growth.

The results in Table 4.1 show that the average ownership concentration among listed firms in EAC is 51.41 per cent whereby the minimum and maximum ownership concentrations are 15.49 per cent and 93.69 per cent respectively. Numerous empirical studies including the World Bank through Doing Business argued that the dominant ownership concentration among the partner states of EAC fuels for weak protection of minority shareholders (Chakra & Kaddoura, 2015; Eyster, 2014). Likewise, Morck, Wolfenzon, and Yeung (2005); Young, Peng, Ahlstrom, Bruton, and Jiang (2008) added that the inefficacy and unpredictable rule of law among emerging economies including partner states of EAC engineers the conflict between the majority and minority shareholders.

Furthermore, Table 4.1 reveals that the partner states of EAC have attracted the foreign ownership at an average of 11.43 per cent. This implies that, the region requires scrupulous efforts to attract potential foreign investors to acquiring more capital for financing. It is worth to note that the cost for doing business in EAC has been reported to be very high because of weak business regulations (Eyster, 2014; World Bank, 2014a, 2016b). A study carried by Barasa et al. (2017) pointed out that the partner states of the EAC namely Kenya, Tanzania and Uganda are overwhelmed with weak institutions. In general, the enforced quality institutions are urged to enhance the lowering of the transaction costs (Skoog, 2005).

Additionally, Table 4.1 reveals that the minimum and maximum foreign ownership among listed companies in EAC stands at 0.01 per cent and 98.17 per cent respectively. This implies that some companies have attracted substantial number of foreign investors in their ownership to improve capital. This is possible because the East African countries have agreed to liberalise the restrictions on foreign ownership and thus, Tanzania and Kenya allow foreign investors to a total control of listed companies similarly to Uganda and Rwanda which were the first to allow foreign ownership up to 100 per cent (Republic of Kenya, 2015; U.S. Department of State, 2015; United Republic of Tanzania, 2014).

Also, as per Table 4.1, the average technical efficiency for publicly listed companies among partner states of EAC is 40.42 per cent whereas the minimum and maximum efficiencies are 0.07 per cent and 70.84 per cent

respectively. The reported result of technical efficiency, it shows that capital markets in partner states of EAC pose serious problems of efficiency (Barasa et al., 2017).

4.3 Panel Unit Root Tests and Panel Cointegration Tests

4.3.1 Introduction

To examine the long-run relationship and policy implications, one should first examine the existence of stationarity among variables using the panel unit root tests. This subsection discusses two tests results namely the panel unit root tests and the panel cointegration tests.

4.3.2 The Results of Panel Unit Root Tests

The objective for testing data stationarity rests on two aspects of forecasting and policy implications. To test for data stationarity, two panel unit root tests of IPS and Fisher – ADF type for individual unit roots were conducted. The output for the panel unit root tests are presented in Table 4.2.

Table 4.2: Individual Panel Unit Root Tests Result

	Im, Pesaran and Shin (IPS) Tests		FISHER – ADF Tests	
	Level (trend and intercept)	First Difference (intercept)	Level (trend and intercept)	First Difference (intercept)
Tobin's Q	-0.603 (0.273) (0)	-13.383*** (0.000) (1)	223.304 (0.015)(0)	544.982*** (0.000)(1)
ROA	-0.272 (0.392) (1)	-9.442*** (0.000) (1)	185.497 (0.373)(0)	450.607*** (0.000)(1)
ROE	-1.444 (0.074) (1)	-12.030*** (0.000) (1)	208.917 (0.069)(1)	516.283*** (0.000)(1)
X	-0.081 (0.467)(1)	-7.323*** (0.000)(1)	167.316 (0.109)(1)	313.195*** (0.000)(1)
X²	-0.095 (0.462) (1)	-7.873*** (0.000) (1)	167.630 (0.106)(1)	321.777*** (0.000)(0)
FO	-0.949 (0.171) (1)	-8.405*** (0.000) (1)	130.849 (0.988)(0)	383.425*** (0.000)(1)
*FO*EFF*	-1.155 (0.123)(1)	-10.820*** (0.000)(1)	177.118 (0.546)(0)	480.219*** (0.000)(1)
LEV	-0.745 (0.228)(1)	-10.427*** (0.000)(1)	209.607 (0.0646)(0)	462.147*** (0.000)(1)
SIZ	-0.054 (0.478)(1)	-8.115*** (0.000)(1)	170.870 (0.675)	406.122*** (0.000)(1)
INV	-0.369 (0.355)(1)	-17.297*** (0.000)(1)	203.573 (0.110)(1)	633.628*** (0.000)(1)
GROW	-0.164 (0.434)(1)	-16.662*** (0.000)(1)	204.275 (0.103)(1)	660.162*** (0.000)(1)

Note: Null Hypothesis: Unit root. The asterisks *** implies significant at 1% significance level. Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. IPS tests statistics are computed using asymptotic normality. Automatic lag length selection based on SIC for both IPS and Fisher ADF tests. The notation: ROA = Return on Assets, ROE = Return on Equity, X = Ownership concentration, X^2 = squared ownership concentration, FO = Foreign Ownership, EFF = Efficiency, LEV = Leverage, SIZ = Firm Size, INV = Investment, GROW = Growth.

The results reported in Table 4.2 indicate that data have unit root that means data are non-stationary at level. The Tobin's Q has mixed results on Fisher-ADF tests. The presence of unity root at level implies that data are unpredictable either at temporary or permanent shocks and labelled unfit for forecasting and policy implications.

Thus, the presence of unit root at level triggered to perform the first difference for all variables. After conducting the first difference test, all variables became stationary and statistically significant at one per cent level of significance on

both intercept and trends. Therefore, stationarity implies that data can sustain any temporary or permanent shocks and any effects brought by shocks are immersed and become part of the system. Thus, the data for this study can be used for forecasting and policy implications. The small p-values were the basis for detecting the presence of the unit root and stationarity.

Table 4.2 tells the presence of data stationarity for ownership structure, control variables and corporate performance for 58 non-financial listed companies among partner states of EAC. The existence of data stationarity furthered examination of the long-run relationships using panel cointegration analysis.

4.3.3 The Results of Pedroni Cointegration Tests

The presence of data stationarity provides a cornerstone to examine the long-run relationship between variables. The Pedroni cointegration tests were employed because they take into accounts for the heterogeneity among countries in EAC. The results for Pedroni tests are presented in Table 4.3.

Table 4.3: Pedroni Panel Cointegration Tests

Pedroni Tests	Tobin's Q	ROA	ROE
i. Panel v-Statistic			
Individual Intercept and Trend	-3.838	5.678***	-46.620
	(0.999)	(0.000)	(1.000)
No Intercept or Trend	-55.098	-442.221	-243.607
	(1.000)	(1.000)	(1.000)
ii. Panel rho-Statistic			
Individual Intercept and Trend	7.682	6.364	9.389
	(1.000)	(1.000)	(1.000)
No Intercept or Trend	4.468	0.500	5.091
	(1.000)	(0.691)	(1.000)
iii. Panel PP-Statistic			
Individual Intercept and Trend	-13.232***	-16.174***	-16.485***
	(0.000)	(0.000)	(0.000)
No Intercept or Trend	-5.316***	-15.614***	-14.117***
	(0.000)	(0.000)	(0.000)
iv. Panel ADF-Statistic			
Individual Intercept and Trend	-7.726***	-13.366***	-21.470***
	(0.000)	(0.000)	(0.000)
No Intercept or Trend	-4.105***	-14.255***	-8.251***
	(0.000)	(0.000)	(0.000)
v. Group rho-Statistic			
Individual Intercept and Trend	10.417	10.596	11.901
	(1.000)	(1.000)	(1.000)
No Intercept or Trend	7.665	6.824	9.245
	(1.000)	(1.0000)	(1.000)
vi. Group PP-Statistic			
Individual Intercept and Trend	-17.376***	-17.767***	-26.840***
	(0.000)	(0.000)	(0.000)
No Intercept or Trend	-11.148***	-18.898***	-12.129***
	(0.000)	(0.000)	(0.000)
vii. Group ADF-Statistic			
Individual Intercept and Trend	-7.964***	-7.178***	-12.457***
	(0.000)	(0.000)	(0.000)
No Intercept or Trend	-6.498***	-10.728***	-7.142***
	(0.000)	(0.000)	(0.000)

Note: Null Hypothesis: No cointegration; p-values are in the brackets Automatic lag length selection based on SIC. The asterisks *** implies significance of Null Hypothesis at 1% significance level

The panel cointegration test is conducted on the ground that the existence of data stationarity implies that data are cointegrated. Lee and Lin (2010) argued that when data are stationary, it implies the presence of data cointegration just like when corporate performance is related with ownership structure whereby this association purports for making statistical inferences. Moreover, it is vital

to emphasise that the relationship between variables can deviate in short-run but ultimately will recollect in the long-run (Lee, Lin, & Chang, 2011).

Referring to Table 4.3, the null hypothesis of no cointegration of four tests out of seven Pedroni tests can be rejected in favour of the alternative hypothesis. This implies that, variables have long-run relationship. The three measures of Tobin's Q, ROA and ROE presented in Table 4.3, have at least four tests out of seven tests to reject the null hypothesis of no cointegration at one per cent significance level. This implies that, - there is an existence of stable long-run relationship of the variables for listed companies in EAC.

4.4 Regression Results of GMM Estimator

The use of GMM was justified earlier in chapter three for its proficiency on generating consistent and unbiased estimates. The superiority of GMM over other technique comprises the way it overcomes the consequences of rejecting the true hypothesis or rejecting the false hypothesis.

The lagged performance is included in the GMM as instrument to account for a problem of unobserved heterogeneity. This means that it is necessary for the instrumental variables to be included in the GMM model. The ownership concentration is endogenously determined and that problem of endogenous should be taken into account. Thus, the regression results for this study are discussed in the following sub-sections.

4.4.1 Linear Relationship between Ownership Concentration and Corporate Performance

This study examined the linear relationship between ownership concentration and corporate performance for 58 non-financial listed companies in EAC. The purpose was to ascertain the claims that under weak rules and regulatory framework, the ownership concentration would result into expropriation by majority shareholders at the expenses of minority shareholders.

The regression output for linear relationship between ownership concentration and corporate performance is presented in Table 4.4. Meanwhile, the first and foremost explanation highlights the lagged dependent variables.

According to Table 4.4, results show that lagged dependent variables for accounting and market performance measures are statistically significant at one per cent significance level. Moreover, the validity of instruments are justified by the probabilities for J-statistics because they are above 10 per cent for accounting and market performance measures (Roodman, 2009a). The statistical significance of lagged variable and the probabilities of J-Statistics which is above 0.1 suggest that instrumental variables attached with the GMM are valid and offer stable estimates for reporting consistence and unbiased results. This is in line with Flannery and Hankins (2013); Law and Azman-Saini (2008); Wintoki et al. (2012).

Thus, premised with the above findings, it can be argued that the empirical results that are attached with this study are appropriate for making statistical

137

inferences. Moreover, one lagged performance was used because it is contended to be appropriate to capture the effect of past towards current performance. This is in line with Nguyen et al. (2015); Roodman (2009a); Zhou et al. (2014).

Table 4.4: Linear Relationship between Ownership Concentration and Corporate Performance[7]

	Dependent variable					
	Tobin's Q		**ROE**		**ROA**	
Variable	**Coefficient**	**Test Statistics**	**Coefficient**	**Test Statistics**	**Coefficient**	**Test Statistics**
Performance (-1)	0.227	13.86*** (0.000)	-0.229	-81.47*** (0.000)	-0.276	-11.72*** (0.000)
X	-0.588	-5.58*** (0.000)	-0.071	-4.83*** (0.000)	-0.778	-14.87*** (0.000)
SIZ	0.259	9.68*** (0.000)	-0.089	-14.05*** (0.000)	-0.266	-12.59*** (0.000)
LEV	-0.233	-1.81* (0.071)	-0.206	-31.95*** (0.000)	-0.177	-5.13*** (0.000)
INV	0.040	3.67*** (0.000)	0.037	31.67*** (0.000)	0.052	4.315*** (0.000)
GROW	0.264	16.88*** (0.000)	0.023	13.99*** (0.000)	0.200	15.47*** (0.000)
Cross-section fixed (first differences)						
S.E. of Regression	0.511		0.118		0.235	
J - Statistics	29.054		39.761		38.598	
Prob(J – Statistics)	0.113		0.163		0.135	

Note: The asterisks ***, ** and * imply significant at 1%, 5% and 10% level of significant respectively; Dynamic panel data are reported with test statistics of t-statistics where p-values are in parentheses. The notation: Performance (-1) = lagged performance, X = Ownership concentration, LEV = Leverage, SIZ = Firm Size, INV = Investment, GROW = Growth.

---

[7] Table 4.3 is based on regression model $Y_{it} = \beta_0 + \beta_1 X_{it} + \chi_i Z_{it} + \varepsilon_{it}$

Where Y_{it} stands for Tobin's Q, ROE and ROA, Z_{it} stands for control variables, ε_{it} is an error term.

4.4.1.1 Accounting Performance Measures

This study employs the return on equity (ROE) and return on assets (ROA) as the accounting performance measures. Results presented in Table 4.3 reveal that the coefficient for ownership concentration is negative and statistically significant determinant of ROE and ROA at one per cent significance level. The negative coefficients imply that ownership concentration has significant deterioration on corporate performance in EAC. This is to say that, majority shareholders pursue their private benefit of control by diverting company's assets at the expense of the minority shareholders.

Thus, increasing of one per cent in ownership concentration deteriorates ROE and ROA by 0.071 per cent and 0.778 per cent respectively. The negative relationship between concentrated ownership and corporate performance shed lights that the horizontal conflict between majority and minority shareholders interests' thereafter principal-principal conflict is pervasive among listed companies in partner states of EAC. The conflict arises because majority shareholders exercise excessive power by diverting company's assets at the expenses of minority shareholders.

The negatively and statistically significant correlation between ownership concentration and corporate performance is in line with the findings of Ongore (2011) who concluded on significant negative relationship between ownership concentrated and corporate performance among listed companies at Nairobi Securities Exchange (NSE) in Kenya. Moreover, the result coincides with the

findings that were published by Doing Business (2015) the agent of the World Bank that, weak legal and regulation frameworks in developing economies including partner states of EAC constitute weak protection of minority shareholders. Therefore, the weak protection of minority investors constitutes the negative impacts toward the financial market developments which in turn frustrate the economic growth at the country and the company level.

The ownership concentration which is an ingredient of internal mechanism is the determinant of corporate governance. Ownership concentration functions well under the supervision of the board of directors, and the board of directors functions well under established institutions. One of the obstacles facing the partner states of the EAC is weak institutional quality. The laxity to enforce institutional quality constitutes weak functional corporate governance practices. Thus, the ownership and control of the company are driven by majority shareholders. The majority shareholders capitalise on this weakness to expropriate company assets which in turn may cause companies to collapse.

This negative and statistically significant relationship between ownership concentration and performance is in line with (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2000, 2002; Yartey and Komla, 2007; Young, Peng, Ahlstrom, Bruton, and Jiang, 2008). These authors argued that the horizontal conflicts in emerging economies are caused by divergence of interests between controlling shareholders and minority shareholders. The expropriation by controlling shareholders deteriorates firms' performance. Alongside with ROE and ROA, Bhagat and Bolton, (2009); Maher and Andersson, (1999)

concluded that better corporate governance stimulate corporate performance whereas weak corporate governance discourage corporate performance.

This study included four control variables. These variables include the firm leverage. The results show that leverage has negative coefficients. The negative coefficient is statistically significant determinant of ROE and ROA at one per cent significance level. Leverage is argued to be the sign of the company creditworthy. This study measures leverage using total debts that embrace short term debt and long term debt. Note that, short term debts are intended to meet working capital requirements whereas long term debts are employed to meet investment requirements.

Thus, the negative relationship connotes the vein that several firms in EAC prefer short term debts. The preference for short term debts emanates from the higher costs that attached to debts. This argument is in line with Kodongo, Mokoaleli-Mokoteli, and Maina (2015); Makoni (2014) who pointed out that the cost of debts in EAC is very high because financial markets are small for bond markets to be active.

Therefore, the high costs of debt among partner states of EAC constitute negative and significant effect between leverage and performance. In general, high cost of debt in EAC prompts companies to employ short term debts and rely on internal financing which are presumed to be cheaper than external financing. This result is in line with study that was carried among the partner states of EAC by Ayako, Kungu, and Githui (2015); Mwangi, Makau, and

Kosimbei (2014) who concluded that preference of equity financing is associated with higher cost of debt (Kodongo et al., 2015; Makoni, 2014). Thus, an increase of one per cent of leverage implies weakening the corporate performance by 0.206 per cent and 0.177 per cent of ROE and ROA respectively.

Moreover, the negative relationship between leverage and firm performance implies that leverage does not improve corporate performance in the region which is overwhelmed by poor protection of minority investors (González, 2013). The negative relationship between leverage and corporate performance is in line with Haniffa and Hudaib (2006) who reported significant negative relationship between leverage and performance.

Furthermore, the pecking order theory states that leverage generates negative effect on corporate performance (Myers, 1984; Myers & Majluf, 1984). Additionally, the negative relationship could also justify the concern by vast literatures that annual reports for low leveraged companies do not disclose detailed information of their companies which signify lack of transparency (Adelopo, 2011; Broberg, Tagesson, & Collin, 2010).

The firm size is another control variable that was included in this study. The results show that firm size is negative and statistically significant to corporate performance at one per cent significance level. The negative relationship was unanticipated because smaller firms are well associated with the ability to

attract predictors and investor pessimism for their alleged inability, ceteris paribus, maintains sufficient future cash flows.

The results suggest that listed companies among partner states in EAC whereby majority are small sized incur higher costs to exploit the economies of scale. This is true for many countries along the SSA region (Munisi & Randøy, 2013; Okpara, 2011). These companies are deficient to absorb resources necessarily for superb corporate performance and thus, they require injection of the expertise and experience for efficacy performance. It is worth to note that, larger companies are acknowledged to be well-organised than smaller companies. The market power for small firms does not guarantee them an entrée to capital markets; as a result they have limited access to exploit potential investment opportunities essentially to expand their investment horizon for higher performance (Yasuda, 2005).

Therefore, any change of the company size by one per cent deters ROE and ROA by 0.089 per cent and 0.267 respectively. The negative and statistically significant relationship coincides with Makoni (2014) who argued that small firms among partner states in EAC, particularly Tanzania depend on internal and retentions for financing. Moreover, these companies are characterised by erratic historical performance and limited collaterals which are obstacles to access external sources from financial institutions. Premised with the above observation, it was argued that internal financing is the dominant form of financing (about 78 per cent) employed by firms in SSA region (Makoni, 2014). This argument is consistent with the view that firms which employ

short term debts in their financing mix generate lower firm performance (Zeitun & Tian, 2007).

Another control variable for this study is investment ratio. This variable has positive and statistically significant with ROE and ROA respectively. The term investment explains the ability of the company to use capital (capital expenditure) to acquire new investments in property and equipment. Table 4.3 shows that any alteration of 1 per cent in investment increases ROE and ROA by 0.037 per cent and 0.052 per cent respectively. This is true because it is less likely for majority shareholders to jeopardise valuable investments undertaken in previous years.

The positive relationship between investment and corporate performance is in line with Durnev and Kim (2005) who argued that investment opportunities are more valuable in weaker regulatory systems. Thus the significant positive relationship implies that capital expenditures enhance the prospective future returns of firms in EAC as hypothesised by prior studies including Akbar, Poletti-Hughes, et al. (2016); Chen et al. (2010); Lang et al. (1989).

Similarly, growth opportunity which is assessed based on the current and previous sales have positive and significant impact on company performance. This means that an increase by one per cent of sales increases ROE and ROA by 0.023 per cent and 0.200 per cent respectively. This implies that regardless of the size, companies are capable of generating reasonable year to year sales. The year to year sales emanate from investments undertaken previously. In

general, this result is the consequence of the positive relationship between capital expenditure and corporate performance. Majority of listed companies showed attractive year to year sales growth which is good indication for growth. This finding is in line with Claessens et al. (2002); Durnev and Kim (2005); Gompers et al. (2003).

4.4.1.2 Market Performance Measures by Tobin's Q

Given that the accounting performance measures concentrates on what the management has accomplished namely backward-looking, the market performance measures concentrates on what the management need to accomplish referred to the forward-looking.

Based on Table 4.3, the result shows that ownership concentration is negative and statistically significant with Tobin's Q at one per cent significance level. The negative and statistically significant coefficient of ownership concentration was reported for accounting performance measures. Thus, an increase by one per cent of ownership concentration deteriorates Tobin's Q by 0.588 per cent. This implies that the market perceives performance to be well explained by dispersed shareholders than with concentrated shareholders. This is because concentrated ownership is associated with principal-principal conflicts which in turn necessitate higher monitoring costs and thus accruing higher risks. The significant negative effect of majority shareholders on market performance is attached with conflicts between majority and minority

shareholders (Demsetz & Lehn, 1985; Pound, 1988; Thomsen, Pedersen, & Kvist, 2006).

Moreover, the expropriation by majority shareholders creates negative image in the eyes of potential investors who withhold intensive capital; as the result, it obstructs the growth of stock markets. Challenges facing growth of stock markets among the partner states in EAC include, insufficient capital, that is, limited liquidity which is associated with low market capitalisation (EAC, 2015b). It is widely established that developed capital markets is significant determinant of the firm growth and the economic growth.

The extent of majority shareholders to divert company assets at the expense of minority shareholders justifies the contention that protection of minority shareholders in EAC is still an enigma. When compared with other developing markets, the Doing Business (2015) ranked the Sub-Saharan Africa including the EAC the lowest score of 4.6 out of 10 on the strength to protect minority shareholders as evidenced in highlighted in Table 1.4.

All the control variables have similar effect as those reported by accounting performance measures except for firm size which turned out to be positive and statistically significant at one per cent significance level. Positive significant relationship between firm size and Tobin's Q implies that the market perceives small sized companies impacts corporate performance by taking advantages emanating from economic changes because of the possibility of these firms to be flexibly to restructure. Moreover, the market performance is reflected by

the potential investment opportunities that influence performance. This finding is in line with Bhattacharyya and Saxena (2009). Thus, increasing one per cent of firm size will significantly stimulate market performance by 0.259 per cent. The growth opportunity has positive and significantly correlation with Tobin's Q. This implies that growth and Tobin's Q are complementary because Tobin's Q is a measure of growth opportunities. The situation in EAC is that there is aspiration for listed companies to grow and there is greater need for external financing to capture investment opportunities which in turn should facilitate standard corporate governance practices (Klapper & Love, 2004a).

Thus, an increase by one per cent in growth opportunity will enhance corporate performance by 0.264 per cent. Moreover, the relationship between growth and Tobin's Q justifies that growth opportunities are the cause rather than the consequences of governance structure. The finding of this study is in line with Francis, Hasan, and Wu (2013); Tobin (1969); Wintoki et al. (2012).

The negative and significant relationship between leverage and Tobin's Q implies that the market perceives the existence of closeness between companies and lenders does not enhance corporate performance. Thus, an increase of one per cent on leverage deteriorates company performance by nearly 0.233 per cent as measured by the Tobin's Q. This finding implies that the undeveloped financial markets in EAC constitute higher costs to acquire external financing from financial institutions. In general, companies desire internal financing and retentions in their financing structure.

The negative relationship concur with measures required to amend weak corporate governance such that equity should replace debt for growth (Reed, 2002). The negative and statistically significant of leverage and Tobin's Q is in line with Pamburai, Chamisa, Abdulla, and Smith (2015); Weir, Laing, and Mcknight (2002).

The next subsection examines the consequences of increased ownership concentration towards corporate performance. The monitoring and controlling effects are explained by cash flows right. Thus, there is a need to examine the outcome to corporate performance when ownership concentration increases to certain degree. Thus, squaring the ownership concentration necessitated to examine the presence of nonlinear relationship.

4.4.2   Monitoring and Expropriation effect of Ownership Concentration

The weak legal and regulatory platforms are the main sources for concentrated ownership resulting into horizontal problems. The results from the preceding sub-sections argued that private benefits of control are incentives for majority shareholders to divert firm assets at the expense of minority investors.

It was stated in chapter three that the squared ownership concentration can justify the monitoring and expropriation conduct for the principal-principal problem (McConnell & Servaes, 1990; Morck et al., 1988; Shleifer & Vishny, 1997). Thus, the nonlinear relationship between ownership concentrated and corporate performance is reported in Table 4.5.

Table 4.5: Nonlinear Relationship between Ownership Concentration and Corporate Performance[8]

Variable	Tobin's Q		ROE		ROA	
	Coefficient	Test Statistics	Coefficient	Test Statistics	Coefficient	Test Statistics
Performance (-1)	0.351	2.232** (0.026)	0.319	16.103*** (0.000)	-0.285	-11.6*** (0.000)
X	-8.745	-1.962* (0.051)	-0.996	-3.602*** (0.004)	-0.891	-2.79*** (0.005)
X²	4.578	2.097** (0.037)	0.481	3.516*** (0.005)	0.472	2.99*** (0.003)
SIZ	0.364	7.811*** (0.000)	-0.003	-2.100** (0.037)	0.009	2.48** (0.014)
LEV	-0.325	-2.037** (0.043)	0.062	4.054*** (0.001)	0.053	8.103*** (0.000)
INV	0.038	1.383 (0.168)	0.004	1.260 (0.209)	0.018	13.17*** (0.000)
GROW	-0.045	-2.63*** (0.009)	0.037	8.663*** (0.000)	0.011	4.22*** (0.000)
Cross-section fixed (first differences)						
S.E. of Regression	0.657		0.035		0.031	
J - Statistics	20.336		24.660		25.797	
Prob (J – Statistics)	0.257		0.172		0.173	

Note: The asterisks ***, ** and * imply significant at 1%, 5%, 10% level of significant respectively. Dynamic panel data are reported with test statistics of t-statistics where p-values are in parentheses. The notation: Performance (-1) = lagged performance, X = Ownership concentration, X^2 = squared ownership concentration, LEV = Leverage, SIZ = Firm Size, INV = Investment, GROW = Growth.

The results presented in Table 4.5 reveal that the lagged ROE has changed to positive as compared to result in Table 4.4 where it was negative. Also, results show that the lagged ROA declines negatively from Table 4.4 to 4.5. The result for higher ROE is in line with the DuPont financial analysis model which asserts that ROE is related with ROA by equity multiplier (financial leverage). The square ownership concentration indicates that firms are more financed by shareholder's equity than debt financing which results into lower

---

[8] Table 4.4 is based on the regression model $Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 X_{it}^2 + \chi_i Z_{it} + \varepsilon_{it}$

Where Y_{it} stands for Tobin's Q, ROE and ROA, Z_{it} stands for control variables, ε_{it} is an error term.

ROA. By the same margin of increased shareholders' equity and lowering liability, the ROE increases (Bodie, Kane, & Marcus, 2014).

The coefficient for ownership concentration is negative whereas the coefficient for square ownership concentration is positive. The negative and positive results are statistically significant at one per cent significance level for the accounting performance measures and the market performance measures. The positive and significant coefficients for the squared ownership concentration on performance measures demonstrate existence of U-shaped relations between ownership concentration and firm performance among publicly listed firms in partner states of EAC.

The U-shape relationship implies that,- as concentration ownership exceeds certain threshold, the entrenchment effect declines as the consequence of cash flows right and thus, interests of all stakeholders become compromised. Additionally, the U-shaped relationship suggests the trade-off and efficiency between expropriation and monitoring behaviour respectively. Some literature argues that higher scope of ownership concentration promotes superior corporate performance because at this level of ownership the private costs of control are higher than private benefits (Chen, Ho, Lee, & Shrestha, 2004; Filatotchev et al., 2013; Hu & Izumida, 2008; Nguyen et al., 2015).

Thus, majority shareholders tend to expropriate minority investors at low level of ownership concentration and incentives are achieved by exercising the monitoring role when ownership concentration increases. Moreover, when

150

level of ownership concentration increases the interest-alignment effect is achieved by protecting all shareholders and attaining company's objectives. These results imply that an increase by one per cent in squared ownership concentration, ROE and ROA increases by 0.481 per cent and 0.472 per cent respectively. Moreover, another implication from this result is that any increase in the level of squared ownership concentration generates a total net effect of 0.996 - 0.481 = 0.515 per cent for ROE and 0.891 − 0.472 = 0.419 per cent for ROA while the total net effect generated by Tobin's Q is 8.745 − 4.578 = 4.167 per cent.

In any context, the ability to maintain this level of performance bears a spill over benefit of creating steady interest-alignments for all shareholders. To maintain interest-alignments for all stakeholders, controlling shareholders in conjunction with the management are required to reduce the degree of earning management. There are empirical evidences which suggest that earnings management pose negative impact to minority shareholders. The earnings management has been reported to prevail among the listed companies in the partner states of the EAC (Waweru & Riro, 2013).

The positive and statistically significant relationship on squared concentration ownership and corporate performance is in line with Bai, Qiao, Joe, Song, and Junxi (2004); Ding, Zhang, and (Zhang,) 2007; Hu and Izumida (2008); Tian (2001). These authors pointed out that the problem associated with private benefit of control can be improved to enhance performance provided that concentrated ownership is increased at a certain level. Thus, the consequence

151

of squared ownership concentration to excite superior performance boosts the attitude and confidence of the minority shareholders to vote with hearts than with feet.

Likewise when Tobin's Q is applied, the squared ownership concentration is positive and statistically determinant of corporate performance at five per cent significance level. Initially an increase by one per cent in the ownership concentration would deteriorate corporate performance by -8.745 per cent. Meanwhile, an increase in squared concentration ownership by one per cent would enhance corporate performance by 4.578 per cent. This result implies that when ownership concentration is sufficiently large, the corporate performance as measured by Tobin's Q increases with an increased ownership concentration. The finding of this study is consistent with results reported by Cheung, Jiang, Limpaphayom, and Lu (2008); Tian (2001).

This increase which is interpreted as squared ownership concentration will exacerbate incentives to extract private benefit of control because at this level of ownership which is associated with cash flow rights makes the costs of control to be higher than benefits of control (Lozano et al., 2015). Thus, the squared ownership concentration impacts corporate performance positively.

The next subsection of this study incorporates the idea from the resource dependency theory which says enlarging ownership structure offers significant impact towards corporate performance. Thus, foreign ownership is incorporated in the model and examines its effect on corporate performance.

4.4.3   Foreign Ownership and Corporate Performance

The presence of foreign ownership among the listed companies in EAC should be the catalyst to promote corporate performance. Superior corporate performance is expected to be in favour of all shareholders because of the interest alignments and more essentially the company objectives will be achieved. However, performance of foreign ownership can be highly excited with friendly and conducive working environment of the host country.

The analysis for the foreign ownership and corporate performance is based on the GMM regression output displayed in Table 4.6.

Table 4.6: Foreign Ownership and Corporate Performance[9]

Variable	Tobin's Q		ROE		ROA	
	Coefficient	Test Statistics	Coefficient	Test Statistics	Coefficient	Test Statistics
Performance (-1)	0.197	5.792*** (0.000)	-0.257	-7.759*** (0.000)	-0.180	-11.80*** (0.000)
X	-0.452	-3.228*** (0.001)	0.108	4.167*** (0.000)	-0.015	-4.31*** (0.000)
FO	0.281	7.687*** (0.000)	0.071	5.244*** (0.000)	0.003	8.27*** (0.000)
SIZ	0.073	1.186 (0.236)	-0.189	-15.04*** (0.000)	0.007	3.67*** (0.003)
LEV	-0.532	-4.941*** (0.000)	-0.142	-6.755*** (0.000)	0.033	13.99*** (0.000)
INV	0.082	4.052*** (0.001)	0.022	5.439*** (0.000)	0.016	20.69*** (0.000)
GROW	0.185	8.781*** (0.000)	0.042	3.235*** (0.001)	0.022	14.69*** (0.000)
Cross-section fixed (first differences)						
S.E. of Regression	0.522		0.122		0.029	
J - Statistics	29.623		28.343		30.578	
Prob(J – Statistics)	0.100		0.246		0.105	

Note: The asterisks ***, ** and * imply significant at 1%, 5%, and 10% level of significant respectively. Dynamic panel data are reported with test statistics of t-statistics where p-values are in parentheses. The notation: Performance (-1) = lagged performance, X = Ownership concentration, FO = Foreign Ownership, LEV = Leverage, SIZ = Firm Size, INV = Investment, GROW = Growth.

The introduction of foreign ownership in the model offers explanation to the ownership concentration and foreign ownership itself. Thus, the discussion of ownership concentration on corporate performance will be sequentially followed by the discussion of foreign ownership on corporate performance.

The coefficients for concentrated ownership for Tobin's Q, ROE and ROA measures are negative, positive and negative respectively. The coefficients are

---

[9] This table 4.6is based on regression model

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 FO_{it} + \chi_i Z_{it} + \varepsilon_{it}$$

Where Y_{it} stands for Tobin's Q, ROE and ROA, Z_{it} stands for control variables, ε_{it} is an error term.

statistically significant determinants of corporate performance at one per cent significance level. The introduction of foreign ownership in the model has impacted the magnitude of ownership concentration. Results in Table 4.6 show that the magnitude for ownership concentration to worsen performance has significantly declined for Tobin's Q and ROA. Meanwhile, the ownership concentration and ROE are positive and significantly correlated to imply that convergence of interest. The essential feature is that, - when the foreign ownership was introduced in the model the deterioration scale of ownership concentration dropped significantly.

Thus, the magnitude for ownership concentration to deter company assets has dropped significantly for Tobin's Q and ROA whereby the net effect achieved for Tobin's Q is -0.452 − (-0.588) = 0.136 per cent; ROA is -0.015 − (-0.778) = 0.763 per cent. Meanwhile, the extent for majority shareholders to expropriate minority shareholders has been dazed by foreign ownership when performance is measured by ROE. Thus, ROE has achieved the net effect of 0.108 − (-0.071) = 0.179 per cent. This implies that the presence of foreign ownership mitigates the extent at which majority shareholders expropriate company assets at the expense of minority shareholders.

On the other hand, the coefficients for foreign ownership are positive and statistically significant at one per cent significance level. Thus, an increase of one per cent in foreign ownership improves corporate performance by 0.281 per cent, 0.003 per cent and 0.071 per cent when performances are measured by Tobin's Q, ROA and ROE respectively. This result implies that protection

of minority shareholders among partner states in EAC can be achieved when ownership structure is diversified. This argument is in line with the resource dependency theory that encompassing the ownership structure through foreign ownership which has positive and significant impact towards corporate performance. The finding of this study is in line with Aggarwal et al. (2011); Douma et al. (2006); Peng and Jiang (2010); Randøy and Goel (2003); Young et al. (2008).

According to resource dependency theory (RDT), the presence of foreign investors in domestic firms promote monitoring role which in turn provide the likelihood for protection of minority investors (Bjuggren et al., 2007; S. Lee, 2008). However, friendly environment for foreign investors should be efficient for them to execute maximum efficiency. It is ascertained that conducting business in corrupt environments encompasses higher transaction costs (Munisi et al., 2014; Rwegasira, 2000).

The next subsection of the study examines the average efficiency scores for listed locally owned firms and firms with composition of foreign ownership. This study also employs efficiency score to examine how efficiency stimulates foreign ownership towards corporate performance. This involves developing the interactive variable between foreign ownership and efficiency scores.

4.4.4 Efficiency scores for Locally Owned Companies and Companies with Foreign Ownership

Efficiency scores were calculated using DEA technique. Then average technical efficiency scores were estimated for each year and presented in Figure 4.1. These averages of efficiency scores were calculated by taking the summation of scores in a particular year, divide by number of companies. The estimation of the average scores for each year was guided by the following estimate

$$\overline{EFF_t} = \frac{\sum\limits_{i,j=1}^{n} EFF_{tij}}{N_{ij}}$$

Where: $\overline{EFF_t}$ is the average efficiency score in a particular year "t", $\sum EFF_{tij}$ is the total efficiency scores in a particular year and N_{ij} is the total number of either i^{th} firms (locally owned companies) or j^{th} firms (foreign owned companies) in a particular year.

Figure 4.1 reports the average of the efficiency scores for locally owned and foreign ownership. Because the decision making units (DMUs) among the partner states of EAC are not at optimal scale and the capital markets are underdeveloped, the variable return to scale (VRS) was employed. It is worth to note that constant return to scale (CRS) was not appropriate in this study because of the requirement that the DMUs should be operating under the optimal scale (Avkiran, 2006; Ramanathan, 2003). Note that, - the efficiency score of zero implies DMU is inefficient while one implies efficient DMU.

157
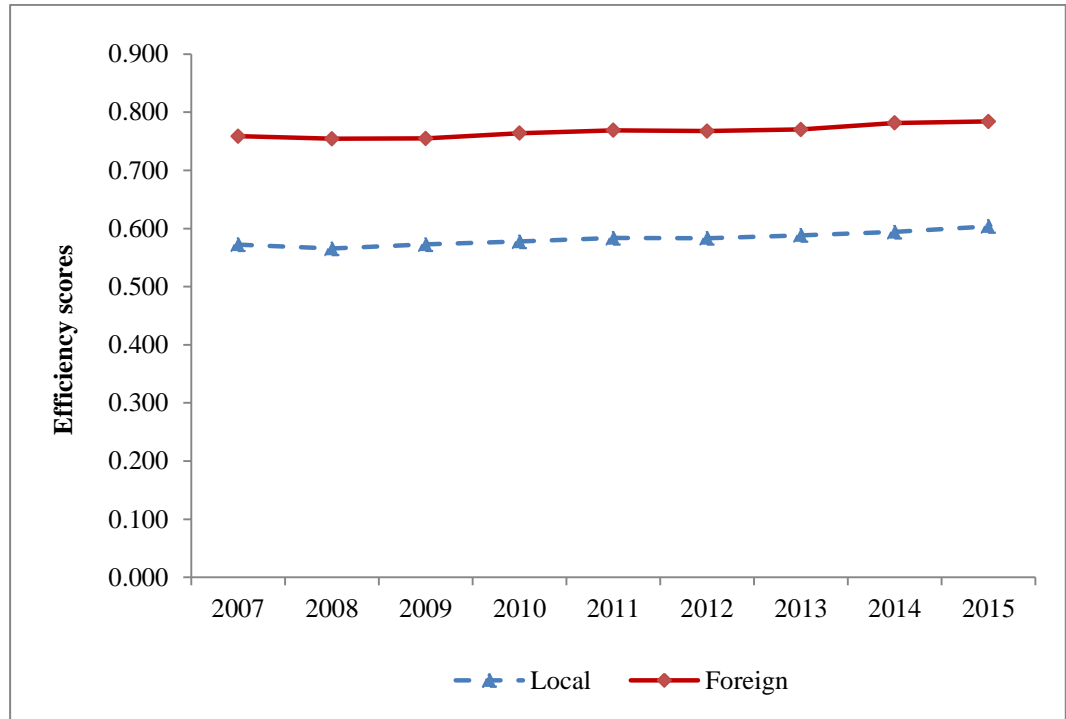
Figure 4.1: Trends for Average Efficiencies of Foreign Ownership and Local Ownership in EAC

The efficiency scores for companies that accommodate foreign ownership are higher than locally owned firms. The trend shows that on average each year since 2007 through 2015, the efficiency score for foreign owned firms are higher than locally owned firms. This means that, foreign ownership constitutes management know-how, skilled labour and monitoring by adhering on standard corporate governance practices. This finding is in line with Aggarwal et al. (2011); Foster-Mcgregor et al. (2015); Huang and Shiu (2009); Willmore (1986). These authors argued that companies which embrace foreign investors in their ownership have advantages that emanates from investment capital, access to foreign market, management skills and they are more efficient compared to the locally owned firms.

158

On average the efficiency scores for companies with foreign ownership are higher than locally owned firms. This could have been contributed by special package available to foreign investors. However, the initial reforms of business regulatory environment constitute significant impact towards efficiency of foreign ownership. Thus, on-going reforms in legislative and regulations in Rwanda and Kenya provide the platform for foreign ownership to excel firm performance. Doing Business, an agent of the World Bank has esteemed efforts commenced by Rwanda to reform and enforce institutional regulations that continuously facilitate ease of doing business for foreign investors (Chakra & Kaddoura, 2015; CPIA Africa, 2016; Gui-Diby, 2014).

Moreover, foreign ownership has tendency to improve efficiency as time goes on compared to locally owned firms. This is because when foreign ownership accommodates efficiency, corporate performance increases. Previous studies confirmed that foreign ownership enjoyed superior productivity after at least three years of operations because of the financial resources injected into a company (Chari, Chen, & Dominguez, 2012a).

In general, companies that accommodate foreign investor in their jurisdiction outperform the locally owned firms by developing promotion investment benefits (Aggarwal et al., 2011; Peng & Jiang, 2010; Young et al., 2008). It is widely accepted that foreign institutions are more efficient than domestic institutions because foreign ownership adheres to best practices (Barney et al., 2001; Douma et al., 2006; Hillman & Dalziel, 2003; Kinda, 2012).

Moreover, foreign ownership provides spill over benefit to the domestic owned firm by creating competitive environment and transfer of know-how. This means that the presence of foreign ownership can promote the crowding-in effect to domestic companies and thus improve corporate performance (Foster-McGregor et al., 2015).

4.4.5 Interaction of Foreign Ownership and Efficiency Scores on Corporate Performance

It was noted that the presence of foreign ownership improved the corporate performance of the listed companies in EAC. However, as stated earlier in chapter two that foreign ownership neither brings miracles nor should it be considered as the therapy for problems facing the EAC.

Explicitly, the constructive business environments excite foreign ownership with opportunity to excel efficiency of corporate performance. Therefore, this study introduces the interactive variable (efficiency score * foreign ownership) to evaluate the ability of efficiency scores to stimulate foreign ownership towards superior corporate performance. The results for interaction variable and corporate performance are reported in Table 4.7.

Table 4.7: Interaction between Efficiency Score and Foreign Ownership[10]

	Dependent variable					
	Tobin's Q		**ROE**		**ROA**	
Variable	**Coefficie nt**	**Test Statistics**	**Coefficie nt**	**Test Statistics**	**Coefficie nt**	**Test Statistics**
Performance (-1)	0.214	2.214** (0.027)	0.200	7.707*** (0.000)	-0.152	-11.92*** (0.000)
X	0.787	0.981 (0.327)	0.019	3.558*** (0.001)	0.033	6.62*** (0.000)
FO	-0.223	-0.166 (0.868)	-0.024	-9.25*** (0.000)	-0.054	-27.89*** (0.000)
*FO*EFF*	0.047	0.036 (0.971)	0.032	12.85*** (0.000)	0.082	46.85*** (0.000)
SIZ	0.320	1.358 (0.175)	-0.020	-10.9*** (0.000)	0.008	4.98*** (0.000)
LEV	-0.417	-0.707 (0.480)	-0.009	-0.70*** (0.484)	0.041	20.64*** (0.000)
INV	0.248	2.649*** (0.008)	0.005	2.572** (0.011)	0.019	13.02*** (0.000)
GROW	0.182	1.483 (0.139)	0.029	12.68*** (0.000)	0.017	17.48*** (0.000)
Cross-section fixed (first differences)						
S.E. of Regression	0.653		0.024		0.037	
J - Statistics	26.517		26.946		22.867	
Prob (J – Statistics)	0.187		0.213		0.351	

Note: The asterisks *** and ** imply significant at 1% and 5% level of significant respectively. Dynamic panel data are reported with test statistics of t-statistics where p-values are in parentheses. The notation: Performance (-1) = lagged performance, X = Ownership concentration, FO = Foreign Ownership, FO*EFF = interactive term, LEV = Leverage, SIZ = Firm Size, INV = Investment, GROW = Growth.

Basing on Table 4.7, the analysis for interaction term which is an interaction between efficiency scores and foreign ownership offers different insights on accounting performance measures and market performance measures as reported in the sub-sections underneath. Note that, the main focus here is directed on the ability of efficiency to boost foreign ownership and also the impact it brings on ownership concentration towards performance.

---

[10] Table 4.6 is based on the regression

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \beta_2 FO_{it} + \beta_3 (FO*EFF) + \chi_i Z_{it} + \varepsilon_{it}$$

Where Y_{it} stands for Tobin's Q, ROE and ROA, Z_{it} stands for control variables, ε_{it} is an error term.

4.4.5.1 Accounting Performance Measures

Table 4.7 reveals that ownership concentration and corporate performance measures are positive and statistically significant at one per cent significance level. This implies that introduction of efficiencies in the model rejuvenates ownership concentration for superb performance. The reason is that efficiency scores have impacted foreign ownership to impart and implement proper corporate governance practices. Efficiency implies that foreign investors are able to intervene and utilizes the management skills, awakening the R&D activities and vitalises the firm to produce competitive products at low cost.

The interactive term of foreign ownership and efficiency implies that foreign ownership is linked with less information asymmetry hence proper conduct of corporate governance practices because ownership concentration has become part of working system. Therefore, an increase of one per cent in ownership concentration increases corporate performance measures of ROA and ROE by 0.033 per cent and 0.019 per cent respectively. Because efficiency seems to excite foreign ownership, it is expected that company objectives will be achieved and the horizontal conflicts are mitigated.

Moreover, an increase of one per cent in interactive term of $FO*EFF$ increases corporate performance measures of ROA and ROE by 0.082 per cent and 0.032 per cent respectively. The significant positive effect of efficiencies on the relationship between foreign ownership and corporate performance signals the importance of quality institution and regulations for provision of

friendly business environment that ease doing business. This implies that foreign ownership is attached with superior monitoring role, disciplinary role and operating ability. These results are consistent with Ali et al. (2010); Buchanan et al. (2012); R. Chen et al. (2014); Doing Business (2015); Gui-Diby (2014).

Furthermore, the results show that when efficiency scores were interacted with foreign ownership, foreign ownership variable converted to negative and statistically significant at one per cent significance level. This impact has made the corporate performance declined by 0.054 per cent and 0.024 per cent for ROA and ROE respectively. This decline can be explained that a certain degree of local ownership is required for optimal output. This result is in line with Greenaway et al. (2014). The fundamental backup for the efficiency to stimulate foreign ownership is based on the disciplinary and monitoring roles played by foreign investors because the monitoring benefits are far higher than the monitoring costs (Bae, Min, & Jung, 2011; Chen, Harford, & Li, 2007; Lien, Tseng, & Wu, 2013).

Therefore, given the importance of efficiency to stimulate the relationship between foreign ownership and corporate performance the threshold for the value of efficiency for optimal performance created by foreign ownership can be determined. For ROA, the minimum efficiency score to affect the relationship can be calculated mathematically as follows:

$$ROA_{it} = -0.152ROA_{i,t-1} + 0.033X - 0.054FO + 0.082(FO * EF)_{it} + \sum Z_{it}$$

Then, ROA is differentiated with respect to FO and find the value of EFF at

stationary point where $\dfrac{\partial ROA_{it}}{\partial FO_{it}} = 0$

Thus,

$$\frac{\partial ROA_{it}}{\partial FO_{it}} = -0.054 + 0.082EF = 0 \Rightarrow EF = 0.658 = 0.66$$

Whereas, for ROE based on the results in table 4.6

$$\frac{\partial ROE_{it}}{\partial FO_{it}} = -0.024 + 0.032EF = 0 \Rightarrow EF = 0.75$$

Foreign ownership can accelerate superior corporate performance when business environment creates the threshold of efficiency of at least 0.66. This result suggests that foreign ownership plays significant role to trigger the level of efficiency of companies especially when the business environment is well enforced. The continual increase of efficiency which is facilitated by institutional quality will result into outstanding corporate performance. This means that, amiably business environment enhances foreign investor to increase capital and transfer technology in the domicile companies.

This result implies that creating more favourable environment provides a benchmark for foreign ownership towards efficacy performance. It was argued by Bevan et al. (2004); Mian (2006) that functioning institutional regulations trigger foreign ownership to allocate more intensive capital and install major technologies. In the same line, X. Chen et al. (2007) argued that foreign investors normally tend to regulate their portfolios chiefly when host country

facilitate amicable business environment. Thus, foreign owners promote corporate governance practices necessary for protection of minority shareholders (Aggarwal et al., 2011; Huang & Shiu, 2009).

The efficiency created by foreign ownership is also contributed by the ability of foreign investors to replace inefficient management with efficient one. This replacement provides the company with an opportunity to fully execute the operating ability. Moreover, the foreign owners employ more expertise and high skilled labour to facilitate the standard corporate governance practices. Thus, the consequence of the interaction enhances efficiency corporate performance and the spill over benefits for protection of minority shareholders. In turn, the protection of minority investors promotes capital market developments and economic outcomes in terms of the country and company levels.

4.4.5.2 Market Performance Measures

The market performance as measured by Tobin's Q has yielded results which are not significant. The results in Table 4.7 show that the coefficient for foreign ownership has dropped after the introduction of interaction variable whereby the coefficient for interactive variable is positive but not statistically significant because they have higher p - values $(p > 0.1)$.

The introduction of interaction variable in the model resulted into declining of the coefficient for foreign ownership. However, the interaction variable which has positive coefficient of 0.047 is not statistically significant. This situation where interactive variable is not significant can be interpreted as follows. First, before the interaction of efficiency on the relationship between foreign ownership and corporate performance, the relationship between foreign ownership and performance was positive and statistically significant.

Second, after the interaction, the coefficients for foreign ownership and interaction variable became negative and positive respectively as it was expected, but they are non-significant. This situation is associated by the market which perceives portion of foreign equity to be itself efficient. This is because of selectivity and creaming by foreign investors which acquire ownership into domestic firms that are well established, productive and are already active. This is what is explained by complementary hypothesis that foreign ownership creates efficiency through selecting productive acquisition (Bozec et al., 2010; Sabirianova, Peter, & Svejnar, 2005).

4.5   Robustness Test

It was stated earlier that GMM estimator is attached with instrumental variables which are supposed to be valid; that they should be exogenous and relevant (Murray, 2006; Schaffer, Baum, & Stillman, 2003; Stock & Yogo, 2005). This study has proposed four instrumental variables referred as control variables: firm size, leverage, investment and sales growth. These variables

are needed to account for endogenous problem due to dynamic endogeneity and unobserved heterogeneity (Y. Hu & Izumida, 2008; Nguyen et al., 2015; Thomsen & Pedersen, 2000; Wintoki et al., 2012). Also, valid instruments are needed to avoid falling in the trap of generating biased estimates (Murray, 2006; Stock & Yogo, 2005).

The test that was developed by Sargan in 1958 is prominent for testing validity of instrumental variables because its methodology is directly connected to the Hansen's GMM estimator (Arellano, 2002; Schaffer et al., 2003). Therefore, the study employed Sargan - Hansen test where the J-Statistics were used to examine the fitness of the model. The calculated J-statistics were above 0.1 (Table 4.4, 4.5, 4.6 and 4.7) to imply that the attached control variables are valid. Therefore, instrumental variables attached to GMM offer stable estimates for reporting consistence and unbiased results.

4.6   Summary

This chapter has reported results for data stationarity based on IPS tests and Fisher-ADF tests where long-run relationship has been established based on Pedroni cointegration tests. The results show that data are stationary at first difference and there exists the long-run relationship between variables to imply that these empirical results are suitable for policy implication and forecasting.

The dynamic GMM estimator was employed to overcome endogenous problems associated with unobserved heterogeneity, omitted variables and simultaneity. This is because ownership concentration is dynamic endogenous whereby the past performance can predict current performance. The use of GMM estimator ensured generating consistent and unbiased estimates to circumvent the likelihood of reporting spurious result.

The accounting and market performance measures concluded on negative and statistically significant between ownership concentration and performance. The incentives for expropriation by the majority shareholders at expenses of minority investors arises because monitoring benefits exceed monitoring costs which endangers protection of minority investors and corporate performance. The expropriation and monitoring behaviour depicts the nonlinear relationship between ownership concentration and corporate performance. Thus, when ownership concentration increases at certain level, the incentive for free riding declines which encompasses higher monitoring costs compared to monitoring benefits. The interest-convergence for stakeholders is achieved and thus, minority shareholders gain confidence for undertaking investments.

Moreover, the locally owned firms embracing foreign investors are significantly efficient than locally owned firms because of the monitoring and disciplinary roles. Thus, foreign investors stimulate superior performance. The interaction between efficiency scores and foreign ownership creates superior corporate performance because of the combination of operating skills and monitoring role that institute standard corporate governance practices.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.1   Introduction

This chapter presents the concluding remarks and recommendations based on the results presented in the previous chapter. The chapter is divided into several subsections; subsection 5.2 presents summary and conclusion and subsection 5.3 reports recommendations. Subsection 5.4 highlights the study limitations whereas; subsection 5.5 suggests the areas for future researches.

5.2   Summary and Conclusion

This study examined the efficiency of corporate governance towards corporate performance among 58 non-financial publicly listed companies in partner states of EAC. The underdeveloped external corporate governance mechanism was linked with laxity to enforce legal and regulatory frameworks; as a result, ownership and control of companies were monitored by majority shareholders. The study was based on the internal mechanism of ownership structure where ownership concentration has propagated poor protection of minority shareholders.

Chapter one pointed out that on the one hand the EAC aimed at building stable and competitive business environment appropriately for good conduct of corporate governance practices and henceforth attracts potential domestic and foreign investors. On the other hand, the prevailed situation among publicly listed firms in partner states of EAC was dominated by ownership concentration which constituted to poor protection of minority investors. Extant literature including the World Bank, had documented on the poor protection of minority shareholders that constituted to high cost of doing business in the EAC (Chakra & Kaddoura, 2015). The chapter also highlighted that the hostile business environment among listed firms faded the catching up of the potential FDI inflows in the region.

Chapter two presented the theoretical overview of corporate governance particularly the agency theory and resource dependency theory that were incorporated in this study. Relevant past studies were identified and were summarised in tables by including main findings. However, some observations were made particularly based on the past studies which used the cross sectional data on the inherent problem of individual heterogeneity.

It was noted that the nature of cross sectional data did not offer for instruments to account for possible endogeneity problem (Börsch-Supan & Köke, 2002). It was also stated that the restrictive nature of the OLS estimator to deal with the assumptions for homoscedasticity, autocorrelation and multicollinearity resulted into inconsistent and biased estimates that led to reporting spurious results. Moreover, it was reported that FEM, GLS and 2SLS suffer the

problem of endogeneity and thus the use of panel data and GMM estimator reduces the likelihood of reporting spurious correlations.

Chapter three was embedded with the research methodology for achieving research objectives. It aimed at providing achievability of the relationship between ownership concentration, foreign ownership and firm performance. The chapter highlighted the importance of enlarging the ownership structure to incorporate foreign ownership as postulated by resource dependency theory which argued that external environment promotes superior performance and protection of minority shareholders (Dalziel et al., 2011; Douma et al., 2006).

The chapter also discussed the dependent variables emanated from accounting and market performance measures, independent variables and control variables. The panel unit root tests of IPS and Fisher-ADF tests and Pedroni panel cointegration tests which account for data heterogeneity were discussed. The Data envelopment analysis (DEA) technique was outlined and used to examine input and output variables for developing efficiency scores based on variable return to scale (VRS). Moreover, advantages of Panel data and GMM estimator were discussed.

Chapter four encompassed the empirical findings of this study. The IPS tests and Fisher-ADF tests confirmed that data are stationary at their first level. The stationarity implied that data were stable and that under strong shocks and fluctuations they could be used for making long-run forecasting. This implied that any effects brought by shocks could be immersed and become part of the

working system. Also, the Pedroni cointegration tests confirmed that data had long run relationship to mean that, data had stable long run relationship for publicly listed companies in EAC. The GMM estimator was employed to generate consistent and unbiased estimates.

This study intended to achieve four objectives. The first objective was achieved by examining the linear relationship between ownership concentration and corporate performance among publicly listed firms in partner states of EAC. The results showed that the ownership concentration was negative and statistically significant determinant of corporate performance as measured by Tobin's Q, ROE and ROA. This negative impact validated the significant deterioration of corporate performance at one per cent significance level. This implied that controlling shareholders pursued the private benefit of control to expropriate company's assets at the expense of minority shareholders. The significant negative relationship between concentrated ownership and corporate performance shed lights that horizontal conflict between majority shareholders and minority shareholders known as principal-principal conflict is persistent.

The negative relationship between ownership concentration and corporate performance had also been concluded by Ongore (2011) for listed companies at Nairobi Securities Exchange in Kenya. Moreover, the World Bank report through the Doing Business (2015) had reported that the laxity to implement legal and regulation framework among the SSA including partner states of EAC fuelled for weak protection of minority shareholders. Thus, the

consequence for negative effect of ownership concentration towards poor protection of minority shareholders devastated the financial market developments and economic growth at the country and the company levels.

The second objective was achieved by examining monitoring and expropriation behaviour by majority shareholders. This behaviour constituted the trade-off and efficiency of expropriation and monitoring role respectively. Thus, to achieve this objective, it required to examine nonlinear relationship by introducing squared ownership concentration in the relationship between ownership concentration and corporate performance. The nonlinearity was achieved for Tobin's Q, ROE and ROA. The coefficients for ownership concentration and squared ownership concentration were statistically significant, negative and positive respectively at one per cent significance level. The significant coefficient for squared ownership concentration implied that as concentration ownership increased at certain threshold, the expropriation effect declined whereas commitment by majority shareholders to monitoring company operations increased. Therefore, this constitutes the so called interests-alignments for all stakeholders. This result was in line with Hu and Izumida (2008).

In general, an adjustment by one per cent in squared ownership concentration improved ROE and ROA by 0.481 per cent and by 0.472 per cent respectively. Moreover, the squared ownership concentration had created a total net effect of 0.515 per cent for ROE and 0.419 per cent for ROA. Meanwhile, an increase by one per cent in squared concentration ownership enhances Tobin's

Q from -8.745 per cent to 4.578 per cent. This means, corporate performance could be enhanced when ownership concentration increased.

Thus, the achieved interest-alignment could be maintained provided that the majority shareholders were ready to curb the stance of earnings management popularly known as creative accounting. The vast literature argued that earning management had negative effects on minority shareholders. Vast empirical evidences that supported the existing state of earnings management among the publicly listed companies in partner states of EAC were presented (Kaboyo & Wamwea, 2014; Ndirangu & Iraya, 2016; Schwab, 2013; Waweru & Riro, 2013).

It is important to note that when ownership concentration increased, incentive for private benefits declined to imply its linkage with accumulated cash flow rights. Additionally, this would imply that the monitoring costs were higher than the monitoring benefits. Thus, the positive and significant relationship between squared ownership concentration and corporate performance was in line with Cheung et al. (2008); Y. Hu and Izumida (2008); Lozano et al. (2015); Tian (2001).

The third objective was achieved by examining the average technical efficiency for domestic companies that accommodated foreign ownership and average technical efficiency for locally ownership. The fundamental intention was to examine average technical efficiencies for these ownerships. This was achieved by developing efficiency scores using DEA technique. On average,

foreign ownership were more technically efficient than locally owned firms over a period of study, 2007-2015. This implied that, foreign ownership were attached with management know how, monitoring and disciplinary role by stressing proper conduct of corporate governance practices. The findings of this study were in line with Aggarwal et al. (2011); Foster-McGregor et al. (2015); R. Huang and Shiu (2009) who had concluded that the on average the foreign owned firms were more technically efficient than the locally owned firms because foreign investors normally improved efficiency continuously as compared with locally owned firms and that foreign investor engage in developing promotion investment benefits and employ higher skilled labour (Aggarwal et al., 2011; Peng & Jiang, 2010; Young et al., 2008).

Furthermore, because foreign investors have more expertise compared to locally investors the technical efficient are higher than locally owned firms because of the efficient utilisation of resources. Previous studies confirmed that foreign ownership excel corporate performance at least three years in their operations following the injection of tremendous resources in the company (Chari et al., 2012a; R. Chen, Ghoul, Guedhami, & Wang, 2017).

The fourth objective was achieved by introducing the interactive variable which was the interaction between efficiency scores and foreign ownership (efficiency scores * foreign ownership). The interactive variable intended to assess the ability of efficiency to stimulate foreign ownership towards superior corporate performance. This was meant to examine and evaluate impact of

foreign ownership to promote firm performance before interaction and after interaction with the efficiency scores.

The results indicated that the introduction of foreign ownership in the model before interaction with efficiencies has resulted into foreign ownership to impact ROA and ROE positively and statistically significant at one per cent significance level. Thus, an increase of one per cent in foreign ownership improved ROA and ROE by 0.003 per cent and 0.071 per cent respectively. This implied that corporate performance could be improved by diversifying the ownership structure. The resource dependency theory argues that external sources namely the foreign ownership creates spill over benefits for corporate performance (Hillman, Withers, & Collins, 2009). The significant positive relationship between foreign ownership and corporate performance was in line with Aggarwal et al. (2011); Douma et al. (2006); Lee (2008); Randøy and Goel (2003) who had argued that the presence of foreign investors in domestic firms facilitated the monitoring role thereby providing likelihood for protection of minority shareholders and improve corporate performance.

It was also noted that the introduction of foreign ownership in the model before interaction had reduced the magnitude of ownership concentration to deteriorate ROA and ROE. Besides reducing the magnitude of deterioration, its effect on ROA remained negative whereas for ROE was converted to positive. This result is justified by the achieved net effect of 0.136 per cent, 0.763 per cent and 0.179 per cent for Tobin's Q, ROA and ROE respectively.

This implies that the presence of foreign investors mitigates the extent of majority shareholders to expropriate company assets.

Furthermore, interaction variable of foreign ownership and efficiency score revealed significant results toward corporate performance. First, the coefficient of ownership concentration changed from negative to positive and statistically significant determinant of corporate performance at one per cent significance level. The changes from negative to positive effect rejuvenates the ownership concentration to become part of a working system and creates the net effect of 0.033 per cent and 0.019 per cent on ROA and ROE respectively. It was pointed out that, the friendly business environment would fuel foreign ownership to install proper conduct of corporate governance practices to generate dividends by accelerating corporate performance and protection of minority shareholders. Hence, efficiency scores stimulated foreign ownership for the company to achieve predetermined goals and mitigating horizontal problems (Aggarwal et al., 2011).

Also it was shown that efficiency score in the model created negative and significant impact on foreign ownership such that corporate performance declined by 0.054 per cent and 0.024 per cent for ROA and ROE respectively. The decline implied that there was a certain level of efficiency necessary to boost foreign ownership toward superior performance. In this view, foreign ownership had accelerated optimal corporate performance when the firm efficiency threshold was at least 0.66. The negative coefficient of foreign ownership implied that certain degree of efficiency was required to perform

optimally (Greenaway et al., 2014). The fundamental backup for the efficiency to stimulate foreign ownership was acquainted with higher monitoring benefits than the monitoring costs (Bae, Min, & Jung, 2011; Chen, Harford, & Li, 2007; Lien, Tseng, & Wu, 2013).

It has been indicated that, the introduction of interaction variable in the model as measured by Tobin's Q had made the coefficient for foreign ownership not statistically significant. The interaction variable was also positive as expected but again the impact is not statistically significant. After interaction, the coefficients for foreign ownership and interaction term were negative and positive respectively as expected but non-significant. This implied that the market perceives the foreign equity by itself to be efficient. The possible explanation rendered here was that foreign investors acquire ownership into domestic firms that were assumed to be well established, productive and active. This is what is explained by complementary hypothesis that foreign ownership created efficiency through selecting productive acquisition (Sabirianova et al., 2005).

5.3   Study Recommendations

This study examined the relationship between ownership concentration and foreign ownership on corporate performance. The agency theory had argued that separation between ownership and control promotes corporate performance. However, the underdeveloped external mechanism of corporate governance among partner states of the EAC confirmed the weak legal and

regulatory frameworks (Munisi & Randøy, 2013). The weak legal and regulatory framework had fuelled majority shareholders to control and exercise full discretion over corporate operations contrary to the agency theory.

Extant literature has argued that ownership concentration in emerging economies including partner states in EAC plots expropriation of the minority investors. Thus, horizontal problems were linked with poor protection of minority shareholders. This study incorporated the resource dependency theory following its enthusiasm that enlarging ownership structure electrify the protection of minority shareholders (Aggarwal et al., 2011; Douma et al., 2006). The study was built on four objectives whose results were discussed in chapter four.

This study has contributed to the existing literature with the empirical evidence for the partner states of EAC that ownership concentration has negative and statistically significant relationship with Tobin's Q, ROA and ROE at one per cent significance level. The negative relationship justifies the on-going debates that majority shareholders in EAC are driven by private benefit of control to extract company assets at the expense of minority shareholders. Thus, this result validates that the persistent poor protection of minority investors among the listed companies in EAC which is associated with the ownership concentration.

This study has also contributed to the existing literature by providing empirical evidence that at lower level of ownership concentration, majority shareholders expropriate company assets and thus obstruct firm performance. It was also verified that at higher level of ownership concentration, controlling investors have incentives to aggressively promote corporate performance through concentrated monitoring role. Thus, the expropriation and monitoring behaviour pertaining to majority shareholders reveals existence of a U-Shaped namely, a nonlinear relationship between ownership concentration and corporate performance among listed firms in partner states of the EAC.

Moreover, this study has contributed to the existing literature by providing empirical evidence that the integration between agency theory and resource dependency theory essentially solicit mitigation of the horizontal problems henceforth providing protection of minority shareholders. This is assessed by introducing the interactive variable emanated from the interaction between efficiency scores and foreign ownership to encompass the monitoring role and disciplinary role. The interactive term accelerates foreign ownership to promote corporate performance essentially to achieve interest-alignment for all shareholders. Therefore, the efficiency scores are capable to stimulate foreign ownership towards superior corporate performance.

In general, based on the first objective of this study, the pervasiveness of ownership concentration among listed companies in partner states of EAC will continue to be vital source for poor protection of minority shareholders. The minority shareholders are bypassed by majority shareholders when making

significant decision about company operations. It is widely acknowledged that poor protection of minority shareholders deters capital market developments (Ameer & Rahman, 2009; Croci & Petmezas, 2010; Othman & Borges, 2015). Thus, based on the empirical results of this study the following measures are recommended to the authorities and policy makers of the partner states of EAC in order to initiate the protection of minority shareholders.

First, this study suggests that there is a need to reinforce the diversity of ownership structure to accommodate the foreign ownership among listed companies in the partner states of the EAC. The empirical evidence from this study has confirmed the know-how of foreign ownership to promote firm performance. Moreover, the validation was boosted when efficiency was interacted with foreign ownership for superior corporate performance. When efficiency scores were interacted with foreign ownership, the scope for foreign ownership to potentially influence corporate performance was noticed to trigger interest alignments for all stockholders and thus promote the protection of minority shareholders.

The authenticity about the partner states of EAC about foreign ownership is that the region has not yet been a good destination for foreign investors in the publicly listed companies. There are advantages attached with the presence of foreign ownership including transfer of technology and ease access to capital, the reasons for many countries including partner states of EAC to attract significant basket of foreign investors in their territories.

Second, the positive effect of efficiency on the relationship between foreign ownership and corporate performance exposes the importance of building better institutional environment among the partner states of EAC. It is widely argued that the economic growth of several economies are partly explained by quality institutions (Acemoglu et al., 2003; North, 1990, 2016). It is worth to note that institutions are moulded to ease suspicions in human interactions. The quality institutions have positive influence towards foreign ownership to excute efficiency on corporate performance. Building friendly business enviromnent that encompasses regulatory frameworks is necessary measure to accelerate FDI inflows henceforth stimulates economic growth (Ali et al., 2010; Bénassy-Quéré et al., 2007).

The partner states of EAC are overwhelmed by lack of transparency, accountability and corruption. The transparency, accountability and corruption constitute quality institutions which are directly linked with poverty reduction (Bräutigam & Knack, 2014; Hyden, 2007). On this regard, Bräutigam and Knack (2014) argued that meagre institutions contribute towards declining of capital investments among African countries including the partner states of EAC. The lack of transparency spearheads mask bribery and exaggerates transaction costs which are unfriendly for FDI inflows. Moreover, the level of corruption among partner states of EAC crafts uncertainties and weakens the level of public and capital investments (Transparency International, 2017; UNECA, 2016).

Premised with the situation pertaining the partner states of EAC, the quality institutions are needed to indoctrinate certainty and polish human interactions. Thus, necessary quality institutions needed to sharpen interactions include but not limited to the government effectiveness, regulatory quality, rule of law and control of corruption (Kaufmann et al., 2010). The implementation of these components will necessitate the socio-economic relations and promote the catching up of potential FDI inflows and henceforth economic growth.

Thus, the region which has functional institutional quality provides higher scope for protection of minority shareholders. This emanates from the sound rules and regulations to overcome horizontal problems between majority and minority shareholder. Moreover, regulatory burden facilitates the promotion of private sector development through imposed capital investment in their operations. In the absence of better institutional environment the region might continue to experience the declining of FDI inflows. It was argued by Asiedu (2006) that the disadvantaged non-rich resource countries can attract potential FDI inflows in their countries via building institutional credibility while lowering the costs for doing business.

Third, the partner states of EAC are urged to weigh the possibilities for adopting the Minority Shareholders Watchdog Group (MSWG) activism. Among the alternatives for promoting healthy corporate governance requires the protection of minority shareholders. The objectives of MSWG make them being referred to as the whistle-blowers for Minority shareholders. Thus, MSWG preferably work into environments that are crowded with weak legal

and regulatory framework such that the minority shareholders are limited to participate in making important decisions pertaining company operations. This activism enhances the minority shareholders to become active members to participate in matters pertaining company operations. The MSWG has been successful in protecting interests of minority shareholders through shareholders activism in Malaysia since its adoption in year 2000 (Othman & Borges, 2015).

The MSWG collects queries from minority shareholders; the queries are then presented to the management of the company who will be required to provide answers during the annual general meeting (Ameer & Rahman, 2009; Othman & Borges, 2015). In this way, minority shareholders are represented in annual general meetings and helped to build confidence in making investment decisions.

Thus, the partner states of EAC could adopt the MSWG strategy as one among alternative strategies for protection of minority shareholders rights, henceforth stimulates capital market developments and economic spill over benefits. The electrifying concerns for initiating MSWG among the partner states of EAC emanates from the pervasiveness ownership concentration to expropriate minority shareholders. The MSWG strategy could work as the agent of security exchanges with the contemplation that governments cannot do everything meanwhile the laws are somewhere sleeping in book shelves.

Therefore, if the financial markets amongst the partner states of EAC remain underdeveloped and authorities in their jurisdictions are laxity to enforce the quality institutions and the ownership concentration perseveres, the future performance of companies will be in jeopardy and eventually companies may collapse, and moreover, the EAC would stack to achieve the aspired objectives.

5.4   Limitations of the Research

The study has analysed the relationship between ownership structure and corporate performance. This study was based on the panel data of 58 non-financial listed companies among partner states of EAC. The EAC region aims at building stable and competitive business platform that companies could contribute for economic growth of the region. It is worth to note that the financial companies have remarkable contribution for the economic growth. Moreover economic growth is contributed by both listed and unlisted companies. It can be concluded that this study was biased to non-financial publicly listed companies in partner states of the EAC.

5.5   Future Research Directions

This study examined the relationship between ownership concentration and foreign ownership on corporate performance. This study employed panel data for 58 non-financial listed firms among the partner states of EAC. Meanwhile, the EAC region desires building stable and competitive business platform for

companies to generate value added investments toward economic growth. Further studies should be carried on for panel data of financial listed companies to assess the effect of the economic reforms that have been undertaken within the region towards corporate performance.

The dynamic GMM estimator has generated results on accounting and market performance measures. While results for accounting measures ROA and ROE have absolutely normal coefficients, the results for the market performance measure Tobin's Q were very interesting. This means that when analysing the expropriation and monitoring behaviour using Tobin's Q, the coefficients for ownership concentration and squared ownership concentration turned overly very large -8.745 and 4.578 respectively. Therefore, these results attract for further theoretical investigation acquainted with these aftermaths.

Moreover, this study has examined performance of ownership concentration. More analysis was conducted by squaring the ownership concentration and examined the expropriation and monitoring behaviour by majority shareholders. The study concluded that at higher level of ownership concentration, there is an interest alignments associated with commitment for monitoring by majority shareholders because of the cash flows right where monitoring benefits are lower than costs. However, it would be very interesting to establish the threshold for different levels of ownership concentration required to maximise optimally.

LIST OF REFERENCES

Acemoglu, D., Johnson, S., Robinson, J., & Thaicharoen, Y. (2003). Institutional causes, macroeconomic symptoms: Volatility, crises and growth. *Journal of Monetary Economics*, *50*(1), 49–123.

Adelopo, I. (2011). Voluntary disclosure practices amongst listed companies in Nigeria. *Advances in Accounting*, *27*(2), 338–345.

Aduda, J., Chogii, R., & Magutu, P. O. (2013). An Empirical Test of Competing Corporate Governance Theories on the Performance of Firms Listed at the Nairobi Securities Exchange. *European Scientific Journal*, *9*(13), 107–137.

AfDB. (2011). *Eastern Africa: Regional Integration Strategy Paper 2011 - 2015*.

Aggarwal, R., Erel, I., Ferreira, M., & Matos, P. (2011). Does governance travel around the world? Evidence from institutional investors. *Journal of Financial Economics*, *100*(1), 154–181.

Akbar, S., Poletti-hughes, J., El-faitouri, R., & Zulfiqar, S. (2016). More on the relationship between corporate governance and firm performance in the UK: Evidence from the application of generalized method of moments estimation. *Research in International Business and Finance*, *38*, 417–429.

Ali, F., Fiess, N., & MacDonald, R. (2010). Do Institutions Matter for Foreign Direct Investment? *Open Economies Review*, *21*(2), 201–219.

Aliabadi, S. (2013). The Most Value Relevant Accounting Performance Measure by Industry Northeastern Illinois University Northeastern Illinois University. *Journal of Accounting and Finance*, *13*(1), 22–35.

Allen, F., & Giovannetti, G. (2011). The effects of the financial crisis on Sub-Saharan Africa. *Review of Development Finance*, *1*(1), 1–27.

Ameer, R., & Rahman, R. A. (2009). The impact of minority shareholder watchdog group activism on the performance of targeted firms in Malaysia. *Asian Academy of Management Journal of Accounting and Finance*, *5*(1), 67–92.

Amihud, Y., & Lez, B. (1981). Risk Reduction as a Managerial Motive for Conglomerate Mergers. *The Bell Journal of Economics*, *12*(2), 605–617.

Arellano, M. (2004). *Panel Data Econometrics: Advanced Texts in Econometrics*. (A. Pagan & M. Watson, Eds.) (1st ed.). Oxford New York: Oxford University Press Inc.

Arellano, M., & Bond, S. (1991). Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *Review of Economic Studies*, *58*(2), 277.

Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial Development and Economic Growth : The Role of Stock Markets. *Journal of Money, Credit and Banking*, *33*(1), 16–41.

Arslan, Ö., Florackis, C., & Ozkan, A. (2014). Financial Flexibility, Corporate Investment and Performance: Evidence from Financial Crisis. *Review of Quantitative Finance and Accounting*, *42*(2), 211–250.

Asiedu, E. (2006). Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability. *The World Economy*, *29*, 63–77.

Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2005). *Bank-specific, industry-specific and macroeconomic determinants of African Islamic banks' profitability* (25 No. 32026). *Working Paper* (Vol. 3). BANK OF GREECE.

Avkiran, N. K. (2006). *Productivity Analysis in the Service Sector with Data Envelopment Analysis*. (N. K. Avkiran, Ed.)*N K Avkiran* (Third Edit, Vol. 3). Brisbane, Australia: N K Avkiran, UQ Business School, The University of Queensland.

Avkiran, N. K., Tone, K., & Tsutsui, M. (2006). Bridging radial and non-radial measures of efficiency in DEA. *Annals of Operations Research*, *164*(1), 127–138.

Ayako, A., Kungu, G., & Githui, T. (2015). Determinants of the Performance of Firms Listed At the Nairobi Securities Exchange. *Research Journal of Finance and Accounting*, *6*(12), 157–165.

Ayandele, I. A., & Emmanuel, I. (2013). Corporate Governance Parctices and Challenges in Africa. *European Journal of Business and Management*, *5*(4), 51–59.

Backman, M. (2004). *The Asian Insider: Unconventional Wisdom for Asian Business*. (Aardvark, Ed.) (1st ed.). PALGRAVE MACMILLAN.

Badunenko, O., Fritsch, M., & Stephan, A. (2006). *What Determines the Technical Efficiency of a Firm? The Importance of Industry, Location, and Size* (Working paper 33/2006). Friedrich-Schiller-Universität Jena.

Bae, S. C., Min, J. H., & Jung, S. (2011). Trading behavior, performance, and stock preference of foreigners, local institutions, and individual investors: Evidence from the Korean stock market. *Asia-Pacific Journal of Financial Studies*, *40*(2), 199–239.

Bahhouth, V., & Gonzalez, R. (2014). Are Financial Measures Leading Indicators to Firm Performance? *International Journal of Business, Accounting, and Finance*, *8*(2), 37–49.

Bai, C.-E., Liu, Q., Lu, J., Song, F. M., & Zhang, J. (2006). An Empirical Study on Corporate Governance and Market Valuation in China. *Frontiers of Economics in China*, *1*(1), 83–111.

Bai, C., Qiao, L., Joe, L., Song, F. M., & Junxi, Z. (2004). An Empirical Study on Corporate Governance and Market Valuation in China. *Journal Of Comparative Economics*, *32*(4), 599–616.

Bajaj, M., Chan, Y.-S., & Dasgupta, S. (1998). 'The relationship between ownership,financing decisions and firm performance: A signaling model. *Journal of the Academy of Marketing Science*, *39*(3), 723–744.

Baltagi, B. H. (2005). *Econometric Analysis of Panel Data*. (B. H. Baltagi, Ed.) (3rd ed.). West Sussex PO19 8SQ, England: John Wiley & Sons Ltd.

Baltagi, B. H., & Kao, C. (2000). Nonstationary Panel, Cointegartion in Panels and Dynamic Panels: A Survey. *Advances in Econometrics*, *15*, 7–51.

Banker, R. D., Charnes, A., & Cooper, W. W. (1984). Some models for estimating technical and scale inefficiencies in data envelopment analysis. *Management Science*, *30*(9), 1078–1092.

Banker, R. D., & Maindiratta, A. (1988). Nonparametric Analysis of Technical and Allocative Efficiencies in Production. *Econometrica*, *56*(6), 1315–1332.

Barasa, L., Knoben, J., Vermeulen, P., Kimuyu, P., & Kinyanjui, B. (2017). Institutions, resources and innovation in East Africa: A firm level approach. *Research Policy*, *46*(1), 280–291.

Barbieri, L. (2006). *Panel Unit Root Tests: A Review. Quaderni del Dipartimento di Scienze Economiche e Sociali, Serie Rossa, N.43*. Università Cattolica del Sacro Cuore, Piacenza.

Barbieri, L. (2009). *Panel Cointegration Tests: A Review. Quaderni del Dipartimento di Scienze Economiche e Sociali, Serie Rossa, N.43*. Università Cattolica del Sacro Cuore, Piacenza.

Barney, J. (2001). Is the Resource-Based "View" a useful perspective for strategic management research? yes. *Academy of Management Review*, *26*(1), 41–56.

Barney, J., Wright, M., & Ketchen, D. J. J. (2001). The resource based view of the firm: Ten years after 1991. *Journal of Management*, *27*(6), 625–641.

Bascle, G. (2008). Controlling for endogeneity with instrumental variables in strategic management research. *Strategic Organization*, *6*(3), 285–327.

Battese, G. E., & Coelli, T. J. (1992). Frontier production functions, technical efficiency and panel data: With application to paddy farmers in India. *Journal of Productivity Analysis*, *3*(1–2), 153–169.

Bebchuk, L. A. (1999). A rent-protection theory of corporate ownership and control. *NBER Working Paper Series*.

Bebchuk, L. A., & Fried, J. M. (2003). Executive Compensation as an Agency Problem. *Journal of Economic Perspectives*, *17*(3), 71–92.

Bebchuk, L. A., & Fried, J. M. (2006). Pay without Performance: Overview of the issues. *Academy of Management Perspectives*, *20*(1), 5–24.

Becht, M., & Boehmer, E. (2003). Voting control in German corporations. *International Review of Law and Economics*, *23*(1), 1–29.

Beiner, S., Drobetz, W., & Schmid, M. (2006). An integrated framework of corporate governance and firm valuation. *European Financial*, *12*(2), 249–283.

Bénassy-Quéré, A., Coupet, M., & Mayer, T. (2007). Institutional determinants of foreign direct investment. *World Economy*, *30*(5), 764–782.

Berger, A. N., & Humphrey, D. B. (1997). Efficiency of Financial lnstitutions: International Survev and Directions for Future Research. *European Journal of Operational Research*, *98*(2), 175–212.

Berglöf, E., & Claessens, S. (2004). Corporate Governance and Enforcement, (August 2015).

Berle, A. A., & Means, G. C. (1933). *The Modern Corporation and Private Property*. (A. A. Berle & G. C. Means, Eds.). New York: The Macmillan Company.

Bevan, A., Estrin, S., & Meyer, K. (2004). Foreign investment location and institutional development in transition economies. *International Business Review*, *13*(1), 43–64.

Beveren, I. Van. (2010). Total Factor Productivity Estimation : a Practical Review, 1–38.

Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, *14*, 257–273.

Bhagat, S., & Bolton, B. (2009). Corporate Governance and Firm Performance: Recent Evidence, (May), 1–57.

Bhagat, S., & Jefferis, R. H. (2002). *The Econometrics of Corporate Governance Studies*. (S. Bhagat & R. H. J. Jr, Eds.). London, England: The MIT Press, Cambridge, MA.

Bhattacharyya, S., & Saxena, A. (2009). *Does the Firm Size Matter? An Empirical Enquiry into the Performance of Indian Manufacturing Firms*. MPRA Paper No. 13029, University Library of Munich, Germany.

Bjuggren, P.-O., Eklund, J. E., & Wiberg, D. (2007). Ownership structure, control and firm performance: the effects of vote-differentiated shares. *Applied Financial Economics*, *17*(16), 1323–1334.

Black, B. S., Jang, H., & Kim, W. (2006a). Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization*, *22*(2), 366–413.

Black, B. S., Jang, H., & Kim, W. (2006b). Predicting firms' corporate governance choices: Evidence from Korea. *Journal of Corporate Finance*, *12*(3), 660–691.

Blomström, M., & Kokko, A. (1997). *Regional Integration and Foreign Direct Investment* (NBER Working Paper No. NBER Working Paper No. 6019).

Blundell, R., & Bond, S. (1998). Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*, *87*(1), 115–143.

Bodie, Z., Kane, A., & Marcus, A. J. (2014). *Investments*. (S. A. Ross & F. Modigliani, Eds.) (10th ed.). New York, NY 10121: McGraw-Hill Education.

Bonin, J. P., Hasan, I., & Wachtel, P. (2005). Bank performance, efficiency and ownership in transition countries. *Journal of Banking and Finance*, *29*(1 SPEC. ISS.), 31–53.

Booth, J. R., & Deli, D. N. (1999). On executives of financial institutions as outside directors. *Journal of Corporate Finance*, *5*(3), 227–250.

Börsch-Supan, A., & Köke, J. (2002). An applied econometricians' view of empirical corporate governance studies. *German Economic Review*, *3*(3), 295–326.

Bossche, F. A. M. Van Den. (2011). Fitting State Space Models with EViews. *Journal of Statistical Software*, *41*(8), 1–16.

Bowlin, W. (1998). An Introduction to Data Envelopment Analysis (DEA). *Journal of Cost Analysis*, *7*(November 1998), 3–7.

Bozec, R., & Dia, M. (2012). Convergence of corporate governance practices in the post-Enron period: behavioral transformation or box-checking exercise? *Corporate Governance*, *12*(2), 243–256.

Bozec, R., Dia, M., & Bozec, Y. (2010). Governance-Performance Relationship: A Re-examination Using Technical Efficiency Measures. *British Journal of Management*, *21*(3), 684–700.

Bräutigam, D. A., & Knack, S. (2014). Foreign Aid, Institutions, and Governance in Sub-Saharan Africa. *Economic Development and Cultural Change*, *52*(2), 255–285.

Broberg, P., Tagesson, T., & Collin, S.-O. Y. (2010). What explains variation in voluntary disclosure? A study of the annual reports of corporations listed on the Stockholm Stock Exchange. *Journal of Management and Governance*, *14*(4), 351–377.

Buchanan, B. G., Le, Q. V., & Rishi, M. (2012). Foreign direct investment and institutional quality: Some empirical evidence. *International Review of Financial Analysis*, *21*(24), 81–89.

Bürker, M., Franco, C., & Minerva, G. A. (2013). Regional Science and Urban Economics Foreign ownership , firm performance, and the geography of civic capital. *Regional Science and Urban Economics*, *43*(6), 964–984.

Caves, R. E. (2007). *Multinational Enterprise and Economic Analysis*. (J. Pencavel, Ed.) (Third Edit, Vol. 53). New York: Cambridge University Press.

Chakra, N. A., & Kaddoura, H. (2015). *Protecting minority investors*. Doing Business, World Bank.

Chang, Y. (2002). Nonlinear IV unit root tests in panels with cross-sectional dependency. *Journal of Econometrics*, *110*, 261–292.

Chang, Y. (2004). Bootstrap unit root tests in panels with cross-sectional dependency. *Journal of Econometrics*, *120*(2), 263–293.

Chari, A., Chen, W., & Dominguez, K. M. E. (2012a). Foreign ownership and firm performance: Emerging market acquisitions in the United States. *IMF Economic Review*, *60*(1), 1–42.

Chari, A., Chen, W., & Dominguez, K. M. E. (2012b). Foreign Ownership and Firm Performance: Emerging Market Acquisitions in the United States. *IMF Economic Review*, *60*(1), 1–42.

Charnes, A., Cooper, W. W., & Rhodes, E. (1978). Measuring the efficiency of decision making units. *European Journal of Operational Research*, *2*(6), 429–444.

Chen, C. J., Lin, B. W., Lin, Y. H., & Hsiao, Y. C. (2016). Ownership structure, independent board members and innovation performance: A contingency perspective. *Journal of Business Research*, *69*(9), 3371–3379.

Chen, M. H., Hou, C. L., & Lee, S. (2012). The impact of insider managerial ownership on corporate performance of Taiwanese tourist hotels. *International Journal of Hospitality Management*, *31*(2), 338–349.

Chen, R., Ghoul, S. El, Guedhami, O., & Wang, H. (2014). Do state and foreign ownership affect investment efficiency? Evidence from privatizations. *Journal of Corporate Finance*, *42*, 408–421.

Chen, R., Ghoul, S. El, Guedhami, O., & Wang, H. (2017). Do state and foreign ownership affect investment efficiency? Evidence from privatizations. *Journal of Corporate Finance*, *42*(C), 408–421.

Chen, S.-S., Ho, K. W., Lee, C.-F., & Shrestha, K. (2004). Nonlinear Models in Corporate Finance Research: Review, Critique, and Extensions. *Review of Quantitative Finance and Accounting*, *22*(2), 141–169.

Chen, W. P., Chung, H., Hsu, T. L., & Wu, S. (2010). External financing needs, corporate governance, and firm value. *Corporate Governance*, *18*(3), 234–249.

Chen, X., Harford, J., & Li, K. (2007). Monitoring: Which institutions matter? *Journal of Financial Economics*, *86*(2), 279–305.

Chen, Y. Y., & Young, M. N. (2010). Cross-border mergers and acquisitions by Chinese listed companies : A principal – principal perspective. *Asia Pacific Journal of Management*, *27*, 523–539.

Chen, Z., Cheung, Y.-L., Stouraitis, A., & Wong, A. W. S. (2005). Ownership concentration, firm performance, and dividend policy in Hong Kong. *Pacific-Basin Finance Journal*, *13*, 431–449.

Cheung, Y. L., Jiang, P., Limpaphayom, P., & Lu, T. (2008). Does corporate governance matter in China? *China Economic Review*, *19*(3), 460–479.

Cho, D. S., & Kim, J. (2007). Outside directors, ownership structure and firm profitability in Korea. *Corporate Governance*, *15*(2), 239–250.

Cho, M. H. (1998). Ownerhip structure, investment, and the corporate value: an empirical analysis. *Journal of Financial Economics*, *47*, 103–121.

Choi, I. (2001). Unit root tests for panel data. *Journal of International Money and Finance*, *20*(2), 249–272.

Choi, S. B., Lee, S. H., & Williams, C. (2011). Ownership and firm innovation in a transition economy: Evidence from China. *Research Policy*, *40*(3), 441–452.

Chung, K. H., & Pruitt, S. W. (1994). A Simple Approximation of Tobin's q. *Financial Management*, *23*(3), 70–74.

Claessens, S., & Djankov, S. (1999). Ownership Concentration and Corporate Performance in the Czech Republic. *Journal of Comparative Economics*.

Claessens, S., Djankov, S., Fan, J., & Lang, L. (1999). *Expropriation of Minority Shareholders in East Asia*. *Washington, DC: World Bank*.

Claessens, S., Djankov, S., Fan, J. P. H., & Lang, L. H. P. (2002). Disentangling the Incentive and Entrenchment Effects of Large Shareholdings. *Journal of Finance*, *LVII*(6), 2741–2771.

Claessens, S., & Yurtoglu, B. (2012). *Corporate Governance and Development: An Update*. Washington, DC 20433.

Claessens, S., & Yurtoglu, B. B. (2013). Corporate governance in emerging markets: A survey. *Emerging Markets Review*, *15*, 1–33.

Coelli, T. J., Rao, D. S. P., O'Donnell, C. J., & Battese, G. E. (2005). *An introduction to efficiency and productivity analysis*. (T. J. Coelli, D. S. P. Rao, C. J. O'Donnell, & G. E. Battese, Eds.) (2nd ed.). New York, USA: Springer Sceine+Business Media, Inc.

Coelli, T., Rahman, S., & Thirtle, C. (2005). Technical, Allocative, Cost and Scale Efficiencies in Bangladesh Rice Cultivation: A Non-parametric Approach. *Journal of Agricultural Economics*, *53*(3), 607–626.

Colombo, M. G., Croce, A., & Murtinu, S. (2014). Ownership structure , horizontal agency costs and the performance of high-tech entrepreneurial firms. *Small Bus Econ*, *42*, 265–282.

Cooksey, B. (2011). *Public goods, rent and business in Tanzania*. *The Africa Power and Politics* (Vol. 6). London.

Cooper, W. W., Seiford, L. M., & Tone, K. (2006). *Introduction to Data Envelopment Analysis and Its Uses. Data envelopment analysis: a comprehensive text with models, applications, references and DEA-solver software*.

Cooper, W. W., Seiford, L. M., & Tone, K. (2007). *Data Envelopment Analysis - A Comprehensive Text with Models, Applications, References and DEA-Solver Software* (2nd ed.). Springer.

Cooper, W. W., Seiford, L. M., & Zhu, J. (2011). *Handbook on Data Envelopment Analysis*. (W. W. Cooper, L. M. Seiford, & J. Zhu, Eds.)*Customer Satisfaction Evaluation: Methods for Measuring and Implementing Service Quality* (2nd ed., Vol. 139). Springer US.

Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, *51*(3), 371–406.

CPIA Africa. (2016). *Assessing Africa's Policies and Institutions* (Vol. 98118). Washington.

Cremers, M. K. J., & Nair, V. B. (2005). Governance Mechanisms and Equity Prices. *The Journal of Finance*, *LX*(6), 2859–2894.

Croci, E., & Petmezas, D. (2010). Minority shareholders' wealth effects and stock market development: Evidence from increase-in-ownership M&As. *Journal of Banking and Finance*, *34*(3), 681–694.

Crook, T. R., Ketchen, D. J., Combs, J. G., & Todd, S. Y. (2008). Strategic resources and performance: A meta-analysis. *Strategic Management Journal*, *29*(11), 1141–1154.

Dalton, D. R., Daily, C. M., Certo, S. T., & Roengpitya, R. (2003). Meta-analyses of Financial Performance and Equity: Fusion or Confusion? *Academy of Management Journal*, *46*(1), 13–26.

Dalziel, T., White, R. E., & Arthurs, J. D. (2011). Principal Costs in Initial Public Offerings. *Journal of Management Studies*, *48*(6), 1346–1364.

Das, D. K., & Dutta, C. B. (2013). Global Financial Crisis and Foreign Development Assistance Shocks in Least Developing Countries. *Journal of Economic Development*, *38*(2), 1–42.

Davies, J. R., Hillier, D., & McColgan, P. (2005). Ownership structure, managerial behavior and corporate value. *Journal of Corporate Finance*, *11*(4), 645–660.

del Gatto, M., di Liberto, A., & Petraglia, C. (2011). Measuring productivity. *Journal of Economic Surveys*, *25*(5), 952–1008.

Delen, D., Kuzey, C., & Uyar, A. (2013). Measuring firm performance using financial ratios: A decision tree approach. *Expert Systems with Applications*, *40*(10), 3970–3983.

Delis, M. D., & Papanikolaou, N. I. (2009). Determinants of bank efficiency: Evidence from a semi-parametric methodology. *Managerial Finance*, *35*(3), 260–275.

Demb, A., & Neubauer, F.-F. (1992). *The Corporate Board: Confronting the Paradoxes*. (O. U. PRESS, Ed.). New York Oxford: Oxford University Press, Inc.

Demirguc-Kunt, A., & Huizinga, H. (2000). Determinants of commercial bank interest margins and profitability: Some international evidence. *World Bank Economic Review*, *13*, 379–408.

Demsetz, H. (1983). The Structure of Ownership and the Theory of the Firm. *The Journal of Law and Economics*, *26*(2), 375–390.

Demsetz, H., & Lehn, K. ennet. (1985). The Structure of Corporate Ownership: Causes and Consequences. *Journal of Political Economy*, *93*(6), 1155–1177.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, *7*(3), 209–233.

Denis, D. K. (2001). Twenty-five years of corporate governance research … and counting. *Review of Financial Economics*, *10*(3), 191–212.

Dhanani, A. (2005). Corporate dividend policy: The views of British financial managers. *Journal of Business Finance and Accounting*, *32*(7–8), 1625–1672.

Dharwadkar, B., George, G., & Brandes, P. (2000). Privatization in Emerging Economies: An Agency Theory Perspective. *Academy of Management Review*, *25*(3), 650–669.

Ding, Y., Zhang, H., & Zhang, J. (2007). Private vs State Ownership and Earnings Management: evidence from Chinese listed companies. *Corporate Governance: An International Review*, *15*(2), 223–238.

Djankov, S., LaPorta, R., Lopez-de-Silanes, F., & Shleifer, A. (2008). The law and economics of self-dealing. *Journal of Financial Economics*, *88*(3), 430–465.

Donaldson, L., & Davis, J. H. (1991). Stewardship Theory or Agency Theory: *Australian Journal of Management*, *16*(June 1991), 49–66.

Donaldson, L., & Davis, J. H. (1993). The Need for Theoretical Coherence and Intellectual Rigour in Corporate Governance Research: Reply to Critics of Donaldson and Davis. *Australian Journal of Management*, *18*(2), 213–224.

Douma, S., George, R., & Kabir, R. (2006). Foreign and domestic ownership, business groups, and firm performance: Evidence from a large emerging market. *Strategic Management Journal*, *27*(7), 637–657.

DSE. (2011). *Blue Print*.

Durnev, A., & Kim, E. H. (2005). To steal or not to steal: Firm attributes, legal environment, and valuation. *Journal of Finance*, *60*(3), 1461–1493.

Dwivedi, A. K., & Ghosh, P. (2014). *Efficiency Measurement of Indian Sugar Manufacturing Firms: A DEA Approach* (working paper series No. CREED/2014/01). India.

Dyck, I. J. A. (2001). Ownership Structure, Legal Protections, and Corporate Governance. In N. (Eds. . In Pleskovic, B. and Stern (Ed.), *annual World Bank Conference on Development Economics 2000.* Washington.

Dyson, R. G., Allen, R., Camanho, A. s., & Shale, E. A. (2001). Pitfalls and protocols in DEA. *European Journal of Operational Research*, *132*(2), 245–259.

EAC. (2011). East African Community Development Strategy (2011 / 12 – 2015 / 16). *Strategy*, (August), 1–215.

EAC. (2015a). *EAC Vision 2050: Regional Vision for Socio-Economic Transformation and Development*.

EAC. (2015b). *East African Community Facts and Figures 2015*. Arusha, Tanzania.

EAC. (2016). *East African Community Facts and Figures 2016*. Arusha, Tanzania.

Earle, J. S., Kucsera, C., & Telegdy, Á. (2005). Ownership Concentration and Corporate Performance on the Budapest Stock Exchange: Do Too Many Cooks Spoil the Goulash? *Corporate Governance, 13*(2), 1–11.

Eisenhardt, K. M. (1989). Making Fast Strategic Decisions in High-Velocity Environments. *Academy of Management Journal*, *32*(3), 543–576.

Ekholm, A., & Maury, B. (2014). Portfolio Concentration and Firm Performance. *Journal of Financial and Quantitative Analysis*, *49*(4), 903–931.

Eyster, G. (2014). *Economic Development and Regional Integration in the East African Community*. Indiana University, Policy Analysis.

Faccio, M., Lang, L. H. P., & Young, L. (2001). Dividends and expropriation. *American Economic Review*, *91*(1), 54–78.

Fama, E. F., & French, K. R. (2000). *Testing Tradeoff and Pecking Order Predictions About Dividends and Debt* (Working Paper No. 506 No. 506). University of Chicago Graduate School of Business.

Fama, E. F., & Jensen, M. C. (1983). Separation of Ownership and Control. *The Journal of Law and Economics*, *26*(2), 33.

Fare, R., & Lovell, C. A. K. (1978). The Measurement of Eciency of Production. *Journal of Economic Theory*, *19*, 150–162.

Farrell, M. J. (1957). The Measurement of Productive Efficiency. *Journal of the Royal Statistical Society. Series A (General)*, *120*(3), 253–290.

Fazli, S., & Agheshlouei, V. (2009). A hybrid measure of efficiency in performance measurement: An application to concrete industries. *Gazi University Journal of Science*, *22*(4), 277–285.

Fich, E. M. (2005). Are Some Outside Directors Better than Others? Evidence from Director Appointments by Fortune 1000 Firms. *The Journal of Business*, *78*(5), 1943–1972.

Filatotchev, I., Jackson, G., & Nakajima, C. (2013). Corporate governance and national institutions: A review and emerging research agenda. *Asia Pacific Journal of Management*, *30*(4), 965–986.

Filatotchev, I., Stephan, J., & Jindra, B. (2008). Ownership structure, strategic controls and export intensity of foreign-invested firms in transition economies. *Journal of International Business Studies*, *39*(7), 1133–1148.

Filatotchev, I., Wright, M., Uhlenbruck, K., Tihanyi, L., & Hoskisson, R. E. (2003). Governance, organizational capabilities, and restructuring in transition economies. *Journal of World Business*, *38*(4), 331–347.

Flannery, M. J., & Hankins, K. W. (2013). Estimating dynamic panel models in corporate finance. *Journal of Corporate Finance*, *19*(1), 1–19.

Foster-McGregor, N., Isaksson, A., & Kaulich, F. (2015). Foreign Ownership and Labour in Sub-Saharan African Firms. *African Development Review*, *27*(2), 130–144.

Francis, B., Hasan, I., & Wu, Q. (2013). Professors in the boardroom and their impact on corporate governance and firm performance. *Financial Management (Forthcoming)*, 547–581.

Freeman, R. (1984). *Strategic management: A stakeholder approach*. (E. M. Epstein, Ed.) (1st ed.). United States of America: Pitman Publishing Inc.

Fulgence, S. E. (2013). *Determinants of Corporate Governance Internet Reporting; Empirical Evidence from Tanzania* (Vol. 3). Deutschland:LAP Lambert Academic Publishing.

Fulgence, S. E. (2014a). Corporate Governance in Tanzania. In S. O. Idowu & K. T. C. Aliyurt (Eds.), *Corporate Governance An International Perspective* (p. 401). Springer-Verlag Berlin Heidelberg.

Fulgence, S. E. (2014b). Corporate Governance in Tanzania. In S. O. Idowu & K. T. C. Aliyurt (Eds.), *Corporate Governance An International Perspective* (1st ed., pp. 157–185). New York Dordrecht London: Springer-Verlag Berlin Heidelberg.

Gaur, A. S., Kumar, V., & Singh, D. (2014). Institutions, resources, and internationalization of emerging economy firms. *Journal of World Business*, *49*(1), 12–20.

Gillan, S. L. (2006). Recent Developments in Corporate Governance: An Overview. *Journal of Corporate Finance*, *12*(3), 381–402.

Gillan, S., & Starks, L. (2003). Corporate Governance , Corporate Ownership , and the Role of Institutional Investors : A Global Perspective. *Journal of Applied Finance*, *13*(2), 4–22.

Glen, J. D., Karmokolias, Y., Miller, R. R., & Shah, S. (1995). Dividend policy and behavior in emerging markets: To Pay or Not to Pay. In *International finance Corporation WB-WP 26* (pp. 1–40). Washington, DC 20433 USA: The World Bank.

Goergen, M., & Renneboog, L. (2001). Investment policy, internal financing and ownership concentration in the UK. *Journal of Corporate Finance*, *7*(3), 257–284.

Golany, B., & Roll, Y. (1989). An application procedure for DEA. *Omega the Inter-National Journal of Management Science*, *17*(3), 237–250.

Gompers, P., Ishii, J. L., & Metrick, A. (2003). Corporate Governance and Equity Prices. *Quarterly Journal of Economics*, *118*, 107–155.

González, V. M. (2013). Leverage and corporate performance: International evidence. *International Review of Economics and Finance*, *25*, 169–184.

Görg, H., & Strobl, E. (2004). Foreign direct investment and local economic development: Beyond productivity spillovers. In *Globalisation, Productivity and Technology* (p. 29). Institute of International Economics in Washington.

Greenaway, D., Guariglia, A., & Yu, Z. (2014). The more the better? Foreign ownership and corporate performance in China. *European Journal of Finance*, *20*(7–9), 681–702.

Greene, W. H. (2014). *Econometric Analysis. Seventh edition.* (Seventh Ed). New York University: Pearson Education Limited - Prentice Hall © 2012.

Grossman, S. J., & Hart, O. D. (1980). Takeover bids , the free-rider problem , and the theory of the corporation. *The Bell Journal of Economics*, *11*(1), 42–64.

Grossman, S. J., & Hart, O. D. (1986). The Costs and Benefits of Ownership: A Theory of Vertical and Lateral Integration. *Journal of Political Economy*, *94*(4), 691–719.

Gugler, K., & Weigand, J. rgen. (2003). Is ownership really endogenous ? *Applied Economics Letters*, *10*, 483–486.

Gui-Diby, S. L. (2014). Impact of foreign direct investments on economic growth in Africa: Evidence from three decades of panel data analyses. *Research in Economics*, *68*(3), 248–256.

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics*. (A. E. Hilbert, Ed.) (5th Edtion). The McGraw-Hill Series.

Güner, A. B., Malmendier, U., & Tate, G. (2008). Financial expertise of directors. *Journal of Financial Economics*, *88*(2), 323–354.

Hadri, K. (2000). Testing for stationarity in heterogeneous panel data. *Econometrics Journal*, *3*, 148–161.

Hahn, J., & Kuersteiner, G. (2002). Asymptotically Unbiased Inference for a Dynamic Panel Model with Fixed Effects When Both n and T Are Large. *Econometrica*, *70*(4), 1639–1657.

Haniffa, R., & Hudaib, M. (2006). Corporate Governance Structure and Performance of Malaysian Listed Companies. *Journal of Business Finance & Accounting*, *33*(7&8), 1034–1062.

Hart, O. (1995). Corporate Governance: Some Theory and Implications. *The Economic Journal*, *105*(430), 678–689.

Hawley, J. P. (2011). Corporate Governance, Risk Analysis, and the Financial Crisis: Did Universal Owners Contribute to the Crisis? In J. P. Hawley, S. J. Kamath, & A. T. Williams (Eds.), *Corporate Governance Failures The Role of Institutional Investors in the Global Financial Crisis* (p. 345). United States of America: University of Pennsylvania Press Philadelphia, Pennsylvania 19104-4112 www.upenn.edu/pennpress.

Hermalin, B. E. (2005). Trends in Corporate Governance Trends in Corporate Governance. *The Journal of Finance*, *LX*(5), 2351–2384.

Hermalin, B. E., & Weisbach, M. S. (2003). Boards Of Directors As An Endogenously Determined Institution: A Survey Of The Economic Literature. *Economic Policy Review*, *9*(1), 7.

Hillman, A. J., Cannella, A. A., & Paetzold, R. L. (2000). The Resource Dependence Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. *Journal of Management Studies*, *37*(2), 235–256.

Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm-performance: integrating agency and resource dependence perspectives. *Academy of Management Review*, *28*(3), 383–396.

Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, *35*(6), 1404–1427.

Himmelberg, C. P., Hubbard, R. G., & Palia, D. (1999). Understanding the determinants of managerial ownership and the link between ownership. *Journal of Financial Economics*, *53*, 353–384.

Hodgson, G. M. (2006). What Are Institutions? *Journal of Economic Issues*, *XL*(1), 1–25.

Holderness, C. G. (2003). *A Survey of Blockholders and Corporate Control*. Federal Reserve Bank of New York.

Holderness, C. G., & Sheehan, D. P. (1988). The role of majority shareholders in publicly held corporations. *Journal of Financial Economics*, *20*, 317–346.

Holmstrom, B. (1979). Moral Hazard and Observability. *The Bell Journal of Economics*, *10*(1), 74–91.

Holmstrom, B. (1982). Moral hazard in teams. *The Bell Journal of Economics*, *11*(2), 74–91.

Holmstrom, B., & Kaplan, S. N. (2001). Corporate Governance and Merger Activity in the United States: Making Sense of the 1980s and 1990s. *Journal of Economic Perspectives*, *15*(2), 121–144.

Hsiao, C. (2003). *Analysis of Panel Data*. (A. Chesher & M. O. Jackson, Eds.) (2nd ed.). New York: Cambridge Universirty Press.

Hsiao, C., & Zhang, J. (2015). IV, GMM or likelihood approach to estimate dynamic panel models when either N or T or both are large. *Journal of Econometrics*, *187*(1), 312–322.

Hsu, L.-T. (Jane), & Jang, S. (Shawn). (2009). Effects of restaurant franchising : Does an optimal franchise proportion exist ? *International Journal of Hospitality Management*, *28*, 204–211.

Hu, H. W., Tam, O. K., & Tan, M. G.-S. (2010). Internal governance mechanisms and firm performance in China. *Asia Pacific Journal of Management*, *27*(4), 727–749.

Hu, Y., & Izumida, S. (2008). Ownership Concentration and Corporate Performance: A Causal Analysis with Japanese Panel Data. *Corporate Governance*, *16*(4), 342–358.

Huang, R., & Shiu, C.-Y. (2009). Local Effects of Foreign Ownership in an Emerging Financial Market: Evidence from Qualified Foreign Institutional Investors in Taiwan. *Financial Management*, *38*(3), 567–602.

Huang, W., & Boateng, A. (2013). The role of the state, ownership structure, and the performance of real estate firms in China. *Applied Financial Economics*, *23*(10), 847–859.

Hurlin, C., & Mignony, V. (2007). *Second Generation Panel Unit Root Tests*. halshs- 00159842.

Huyghebaert, N., & Wang, L. (2012). Expropriation of Minority Investors in Chinese Listed Firms : The Role of Internal and External Corporate Governance Mechanisms. *Corporate Governance: An International Review*, *20*(3), 308–332.

Hyden, G. (2007). Governance and poverty reduction in Africa. In *Proceedings of the National Academy of Sciences of the United States of America,* (Vol. 104, pp. 16751–16756).

Idowu, S. O., & Çaliyurt, K. T. (2014). *Corporate governance: An International Perspective* (1st ed.). Springer-Verlag Berlin Heidelberg.

Im, K. S., Pesaran, M. H., & Shin, Y. (2003). Testing for unit roots in heterogeneous panels. *Journal of Econometrics*, *115*(1), 53–74.

Isik, I., & Hassan, M. K. (2003). Efficiency, Ownership and Market Structure, Corporate Control and Governance in the Turkish Banking Industry. *Journal of Business Finance & Accounting*, *30*(9/10), 1363–1421.

Iskander, M. R., & Chamlou, N. (2000). *Corporate Governance: A Framework for Implementation*. Washington, DC: The World Bank Group.

Jenkins, L., & Anderson, M. (2003). A multivariate statistical approach to reducing the number of variables in data envelopment analysis. *European Journal of Operational Research*, *147*, 51–61.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow, Corporate Finance, and Takeovers. *The American Economic Review*, *76*(2), 323–329.

Jensen, M. C. (1986). Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers. *American Economic Review*, *76*(2), 323–329.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, *3*(4), 305–360.

Jensen, M. C., & Ruback, R. S. (1983). The Market For Corporate Control: The Scientific Evidence. *Journal of Financial Economics*, *11*, 5–50.

Jiang, Y., & Peng, M. W. (2011). Principal-principal conflicts during crisis. *Asia Pacific Journal of Management*, *28*, 683–695.

Johnson, S., Boone, P., Breach, A., & Friedman, E. (2000). Corporate governance in the Asian financial crisis. *Journal of Financial Economics*, *58*(1–2), 141–186.

Johnson, S., LaPorta, R., Lopez-de-Silanes, F., & Shleifer, A. (2000). Tunneling. *The American Economic Review*, *90*(2), 22–27.

Kaboyo, O. W., & Wamwea, G. M. (2014). Motivation Factors for Earning Management Pracice in Public Listed Companies in Kenya. In *5th African International Business and Management (AIBUMA)* (p. 38).

Kang, H.-W., Wang, G. W. Y., Bang, H.-S., & Woo, S.-H. (2015). Economic performance and corporate financial management of shipping firms. *Maritime Economics & Logistics*, (May 2015), 1–14.

Kang, K. H., Lee, S., & Huh, C. (2010). Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry. *International Journal of Hospitality Management*, *29*, 72–82.

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). *Governance Matters VIII: Aggregate and Individual Governance Indicators 1996-2008* (The World Bank, Policy Research Working Paper No. 4978).

Kaufmann, D., Kraay, A., & Mastruzzi, M. (2010). *The Worldwide Governance Indicators: A Summary of Methodology, Data and Analytical Issues* (The World Bank, Policy Research Working Paper No. 5430). The World Bank, Policy Research Working Paper 5430.

Kazarwa, W. (2015). The Challenges of Emerging Stock Markets in Africa: Case of Rwanda Stock Exchange. *East African Journal of Science and Technology*, *5*(1), 257–265.

Keasey, K., Short, H., & Watson, R. (1994). Directors â€™ Ownership and the Performance of Small and Medium Sized Firms in the U . K . *Small Business Economics*, *6*, 225–236.

Keasey, K., Thompson, S., & Mike, W. (2005). Corporate Governance: Accountability, Enterprise and International Comparisons. In K. Keasey, S. Thompson, & M. Wright (Eds.), (p. 464). John Wiley & Sons Ltd,.

Keong, C. C. (2007). *The Role of Private Capital Flows on GDP of Low, Middle and High Income Group Countries*. PhD Thesis, Universiti Putra Malaysia, Malaysia.

Khanna, V., & Zyla, R. (2010). *Survey Says ...Corporate Governance Matters to Investors in Emerging Market Companies*. Washington, DC 20433 USA.

Kibuthu, G., & Osano, E. (2010). *Developing Securities Markets in East Africa : Challenging , but Well Worth the Effort*. IFC - WB Group.

Kim, H. (2010). Does Corporate Governance or Transparency Affect Foreign Direct Investment? *World Academy of Science, Engineering and Technology*, *4*(7), 159–166.

Kinda, T. (2012). Foreign ownership, sales to multinationals and firm efficiency: the case of Brazil, Morocco, Pakistan, South Africa and Vietnam. *Applied Economics Letters*, *19*(6), 551–555.

Kittelsen, S. a. C. (1993). *Stepwise DEA; Choosing variables for measuring technical efficiency in Norwegian electricity distribution*. *Resources and Energy*.

Klapper, L. F., & Love, I. (2004a). Corporate Governance, Investor Protection, and Firm Performance in Emerging Markets. *Journal of Corporate Finance*, *10*(5), 703–728.

Klapper, L. F., & Love, I. (2004b). Corporate governance, investor protection, and performance in emerging markets. *Journal of Corporate Finance*, *10*(5), 703–728.

Kodongo, O., Mokoaleli-Mokoteli, T., & Maina, L. (2015). Capital structure, profitability and firm value: panel evidence of listed firms in Kenya. *African Finance Journal*, *17*(1), 1–20.

Kroszner, R. S., & Strahan, P. E. (2001). Bankers on boards: : Monitoring, conflicts of interest, and lender liability. *Journal of Financial Economics*, *62*(3), 415–452.

Kumar, N., & Singh, J. P. (2013). Global Financial Crisis: Corporate Governance Failures and Lessons. *Journal of Finance, Accounting & Management*, *4*(1), 21–34.

Kurniasih, A., Siregar, H., Sembel, R., & Achsani, N. A. (2011). Corporate Dividend Policy in an Emerging Market : Evidence from Indonesia Stock Exchange (IDX) 2001-2008. *International Research Journal of Finance and Economics*, *72*(72).

Kyereboah-Coleman, A. (2008). Corporate governance and firm performance in Africa: a dynamic panel data analysis. *Studies in Economics and Econometrics*, *32*(2), 1–24.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate Ownership Around the World. *The Journal of Finance*, *54*(2), 471–517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1997). Legal Determinants of External Finance. *The Journal of Finance*, *LII*(3), 1131–1150.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2000a). Investor protection and corporate governance. *Journal of Financial Economics*, *58*, 3–27.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (2002). Investor Protection and Corporate Valuation. *The Journal of Finance*, *57*(3), 1147–1170.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2000b). Agency Problems and Dividend Policies Around the World. *American Finance Association*, *55*(1), 1–33.

Lambertides, N., & Louca, C. (2008). Ownership structure and operating performance: evidence from the European maritime industry. *Maritime Policy & Management: The Flagship Journal of International Shipping and Port Research*, *35*(4), 395–409.

Lang, L. H. P., & Litzenberger, R. H. (1989). Dividend announcements: Cash Flow Signaling vs. Free Cash Flow Hypothesis? *Journal of Financial Economics*, *24*(1), 181–191.

Lang, L., Stulz, R., & Walkling, R. A. (1989). Managerial performance, Tobin's Q, and the gains from successful tender offers. *Journal of Financial Economics*, *24*(1), 137–154.

Law, S. H., & Azman-Saini, W. N. W. (2008). *The Quality of Institutions and Financial Development*. *MPRA Paper 12107*. University Library of Munich, Germany.

Lee, S. (2008). *Ownership Structure and Financial Performance: Evidence from Panel Data of South Korea* (2008-17 No. 17) (Vol. 6). University of Utah, Department of Economics, No. 2008-17.

Lee, S. (2009). *Corporate governance and firm performance*. The University of Utah.

Lee, S.-C., & Lin, C.-T. (2010). An accounting-based valuation approach to valuing corporate governance in Taiwan. *Journal of Contemporary Accounting and Economics*, *6*(2), 47–60.

Lee, S.-C., Lin, C.-T., & Chang, P.-T. (2011). An Ohlson valuation framework for valuing corporate governance: The case of Taiwan. *Pacific Basin Finance Journal*, *19*(4), 420–434.

Lensink, R., Meesters, A., & Naaborg, I. (2008). Bank efficiency and foreign ownership: Do good institutions matter? *Journal of Banking and Finance*, *32*(5), 834–844.

Levin, A., Lin, C. F., & Chu, C. S. J. (2002). Unit root tests in panel data: Asymptotic and finite-sample properties. *Journal of Econometrics*, *108*(1), 1–24.

Levine, R. (1999). Law, Finance, and Economic Growth. *Journal of Financial Intermediation*, *8*, 8–35.

Levinsohn, J., & Petrin, A. (2003). Production Functions Estimating to Control for Using Inputs Unobservables. *The Review of Economic Studies*, *70*(2), 317–341.

Lewin, A. Y., Morey, R. C., & Cook, T. J. (1982). Evaluating the administrative efficiency of courts. *Omega*, *10*(4), 401–411.

Lien, D., Tseng, M. C., & Wu, S. (2013). Foreign investors in Taiwan: Their roles and government perspectives. *Business Horizons*, *56*(6), 749–756.

Lindenberg, E. B., & Ross, S. A. (1981). Tobin's Q Ratio and Industrial Organization. *The Journal of Business*, *54*(1), 1–32.

Lovell, A. (2005). *Ethics in Business: A Literature Review*. *ICAS Research Publications*. The Institute of Chartered Accountants of Scotland.

Lozano, M. B., Martínez, B., & Pindado, J. (2015). Corporate governance, ownership and firm value: Drivers of ownership as a good corporate governance mechanism. *International Business Review*, *xxx*, 11.

Lu, W. M., Wang, W. K., Hung, S. W., & Lu, E. T. (2012). The effects of corporate governance on airline performance: Production and marketing efficiency perspectives. *Transportation Research Part E: Logistics and Transportation Review*, *48*(2), 529–544.

Luo, J., Wan, D., & Cai, D. (2012). The private benefits of control in Chinese listed firms : Do cash flow rights always reduce controlling shareholders ' tunneling ? *Asia Pacific Journal of Management*, *29*(2341), 499–518.

Maddala, G. S. (1999). On the Use of Panel Data Methods with Cross-Country Data. *ANNALES D'ÉCONOMIE ET DE STATISTIQUE*, (N° 55-56), 429–449.

Maddala, G. S., & Kim, I.-M. (2002). *Unit Roots, Cointegration and Structure Change*. (G. . Maddala & I.-M. Kim, Eds.). UK: Cambridge University Press.

Maddala, G. S., & Wu, S. (1999). A comparative study of unit root tests with panel data and a new simple test. *Oxford Bulletin of Economics and Statistics*, *61*(S1), 631–652.

Madhanagopal, R., & Chandrasekaran, R. (2014). Selecting Appropriate Variables for DEA Using Genetic Algorithm (GA) Search Procedure. *International Journal of Data Envelopment Analysis and Operations Research*, *1*(2), 28–33.

Mahadeva, L., & Robinson, P. (2004). Unit Root Testing to Help Model Building. *Handbook in Central Banking*, (22), 1–53.

Maher, M., & Andersson, T. (1999). *Corporate Governance: Effects on Firm Performance and Economic Growth*. Organisation for Economic Co-operation and Development.

Mak, Y. T., & Kusnadi, Y. (2005). Size really matters : Further evidence on the negative relationship between board size and firm value. *Pacific-Basin Finance Journal*, *13*, 301–318.

Makoni, P. L. (2014). Finance and firm characteristics in Tanzania. *Banks and Bank Systems*, *9*(4), 92–98.

Mang'unyi, E. E. (2011). Ownership Structure and Corporate Governance and Its Effects on Performance: A Case of Selected Banks in Kenya. *International Journal of Business Administration*, *2*(3), 2–18.

Massele, J., Darroux, C., Jonathan, H., & Fengju, X. (2013). Challenges faced by Dar-es-Salaam Stock Exchange Market in Tanzania, *4*(15), 36–43.

Mayer, C. (2002). Corporate Cultures and Governance: Ownership, Control and Governance of European and US Corporations. In F. Barca & M. Becht (Eds.), *"The Control of Corporate Europe",* (p. 36). Oxford University Press Inc.

McConnell, J. J., & Servaes, H. (1990). Additional evidence on equity ownership and corporate value. *Journal of Financial Economics*, *27*(2), 595–612.

McDonald, J. (2009). Using least squares and tobit in second stage DEA efficiency analyses. *European Journal of Operational Research*, *197*(2), 792–798.

Melyoki, L. L. (2005). *Determinants of Effective Corporate Governance in Tanzania*. PhD Thesis, University of Twente, Enschede.

Meyer, K. E., Estrin, S., Bhaumik, S., & Peng, M. W. (2009). Institutions, resources and entry strategies in emerging economies. *Strategic Management Journal*, *30*(1), 61–80.

Mian, A. (2006). Distance constraints: The limits of foreign lending in poor economies. *Journal of Finance*, *61*(3), 1465–1505.

Miguel, A. De, Pindado, J., & Torre, C. De. (2001). Ownership Structure and Firm Value : New Evidence from the Spanish Corporate Governance System. *Economia*, *34*(9).

Mikkelson, W. H., Partch, M. M., & Shah, K. (1997). Ownership and operating performance of companies that go public. *Journal of Financial Economics*, *44*, 281–307.

Moon, H. R., & Perron, B. (2004). Testing for a unit root in panels with dynamic factors. *Journal of Econometrics*, *122*(1), 81–126.

Morck, R., Shleifer, A., & Vishny, R. W. (1988). Management ownership and market valuation: An Empirical Analysis. *Journal of Financial Economics*, *20*, 293–315.

Morck, R., Wolfenzon, D., & Yeung, B. (2005). Corporate Governance, Economic Entrenchment, and Growth. *Journal of Economic Literature*, *43*(3), 655–720.

Mudambi, R., & Pedersen, T. (2007). *Agency Theory and Resource Dependency Theory : Complementary Explanations for Subsidiary Power in Multinational Corporations* (SMG WP 5/2007 No. 5). Basingstoke.

Mueller, D. C., Dieti, H., & Peev, E. (2003). Ownership and Performance.pdf. *Journal for Institutional Innovation, Development & Transition*.

Mueller, D. C., & Peev, E. (2005). Ownership Structures and Investment Performance in Central and Eastern Europe. *Journal for Institutional Innovation, Development and Transition*, (October), 14–15.

Mule, R. K., Mukras, M. S., & Oginda, M. N. (2013). Ownership Concentration and Financial Performance of Listed Firms in Kenya: an Econometric Analysis using Panel Data. *European Scientific Journal*, *9*(28), 194–211.

Munisi, G., Hermes, N., & Randøy, T. (2014). Corporate boards and ownership structure: Evidence from Sub-Saharan Africa. *International Business Review*, *23*(4), 785–796.

Munisi, G., & Randoy, T. (2013). Corporate Governance and Company Performance across Sub-Saharan African Countries. *Journal of Economics and Business*, *70*, 92–110.

Munisi, G., & Randøy, T. (2013). Corporate governance and company performance across Sub-Saharan African countries. *Journal of Economics and Business*, *70*, 92–110.

Murali, R., & Welch, J. B. (1989). Agents, Owners, Control and Performance. *Journal of Business Finance & Accounting*, *16*(3), 385–398.

Murongo, T. M. (2013). *Corporate Governance and Financial Performance of Commercial Banks in Uganda: a Case of Stanbic Bank Uganda Limited*.

Mwangi, L. W., Makau, S. M., & Kosimbei, G. (2014). Relationship between Capital Structure and Performance of Non- Financial Companies Listed In the Nairobi Securities Exchange, Kenya. *Global Journal of Contemporary Research in Accounting, Auditing and Business Ethics (GJCRA)*, *1*(2), 72–90.

Myers, S. C. (1984). The Capital Structure Puzzle. *The Journal of Finance*, *39*(3), 575–592.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, *13*(2), 187–221.

Nanka-Bruce, D. (2011). Corporate Governance Mechanisms and Firm Efficiency. *International Journal of Business and Management*, *6*(5), 28–40.

Ndirangu, E. W., & Iraya, C. (2016). The Effect Of Cross Listing On The Accounting Quality Of Firms Cross Listed In East African Markets. *European Scientific Journal*, *12*(10), 403–416.

Nedelea, I. C., & Fannin, J. M. (2013). Technical efficiency of Critical Access Hospitals: An application of the two-stage approach with double bootstrap. *Health Care Management Science*, *16*(1), 27–36.

Nguyen, T., Locke, S., & Reddy, K. (2015). Ownership concentration and corporate performance from a dynamic perspective: Does national governance quality matter? *International Review of Financial Analysis*, *41*, 148–161.

Nicholson, G. J., & Kiel, G. C. (2007). Can Directors Impact Performance? A Case Based Test of Three Theories of Corporate Governance. *Corporate Governance: An International Review*, *15*(4), 585–608.

Niţoi, M., & Spulbar, C. (2015). An Examination of Banks' Cost Efficiency in Central and Eastern Europe. *Procedia Economics and Finance*, *22*(November 2014), 544–551.

North, D. C. (1990). *Institutions, Institutional Change and Economic Performance*. *Cambridge University Press*. Cambridge.

North, D. C. (2016). Institutions and Economic Theory. *The American Economist*, *61*(1), 72– 76.

Nyaki, J. V. (2013). A Critical Analysis of Tanzanian Corporate Governance Regulation and its Impacts on Foreign Investment, (May), 1–9.

Oberholzer, M. (2014). A Model To Estimate Firms' Accounting-Based Performance: A Data Envelopment Approach. *International Business & Economics Research Journal*, *13*(6), 1301–1314.

OECD. (2003). *Public Sector Transparency and Accountability: Making it Happen*.

OECD. (2004). *Corporate Governance: A Survey of OECD Countries*. (OECD & S. Group, Eds.)*Oecd*. OECD Publications Service.

OECD. (2009). *OECD Factbook 2009: Economic, Environmental and Social Statistics*. Paris.

OECD. (2014). *Corporate Governance Factbook*.

OICU-IOSCO. (2009). *Protection of Minority Shareholders in Listed Issuers: Final Report. Corporate Governance*.

Okiro, K., & Aduda, P. J. (2015). The Effect of Corporate Governance and Capital Structure on Performance of Firms Listed at the East African Community Securities Exchange. *European Scientific Journal*, *11*(7), 517–546.

Okpara, J. O. (2011). Factors constraining the growth and survival of SMEs in Nigeria: Implications for poverty alleviation. *Management Research Review*, *34*(2), 156–171.

Olesen, O. B., & Petersen, N. C. (2015). Stochastic Data Envelopment Analysis—A review. *European Journal of Operational Research*, *251*(1), 2–21.

Olley, S., & Pakes, A. (1996). The Dynamics of Productivity in the Telecommunications Equipment Industry. *Econometrica*.

Omran, M. M., Bolbol, A., & Fatheldin, A. (2008). Corporate governance and firm performance in Arab equity markets: Does ownership concentration matter? *International Review of Law and Economics*, *28*(1), 32–45.

Ongore, V. O. (2011). The relationship between ownership structure and firm performance : An empirical analysis of listed companies in Kenya. *African Journal of Business Management*, *5*(6), 2120–2128.

Ongore, V. O., K'Obonyo, P. O., & Ogutu, M. (2011). Implications of Firm Ownership Identity and Managerial Discretion on Financial Performance: Empirical Evidence from Nairobi Stock Exchange. *International Journal of Humanities and Social Science*, *1*(13), 187–195.

Oriwo, E. A. (2012). *The Relationship between Macro Economic Variables and Stock Market Performance in Kenya*.

Othman, S., & Borges, W. G. (2015). Shareholder Activism in Malaysia: Is It Effective? *Procedia - Social and Behavioral Sciences*, *172*, 427–434.

Oulton, N. (1981). Aggregate Investment and Tobin's Q: The Evidence from Britain. *Oxford Economic Papers, New Series, 33*(2), 177–202.

Pamburai, H. H., Chamisa, E., Abdulla, C., & Smith, C. (2015). An analysis of corporate governance and company performance: a South African perspective. *South African Journal of Accounting Research*, *29*(2), 115–131.

Pastor, J. T., Ruiz, J. L., & Sirvent, I. (2002). A statistical test for nested radial DEA models. *Operations Research*, *50*(4), 728–735.

Pedroni, P. (2004). Panel Cointegration: Asymptotic and Finite Sample Properties of Pooled Time Series Tests With an Application To the Ppp Hypothesis. *Econometric Theory*, *20*(3).

Peng, M. W., & Jiang, Y. (2010). Institutions behind family ownership and control in large firms. *Journal of Management Studies*, *47*(2), 253–273.

Pervan, M., Pervan, I., & Todoric, M. (2012). Firm Ownership and Performance : Evidence for Croatian Listed Firms. *World Academy of Science, Engineering and Technology*, *6*(1), 964–970.

Pesaran, M. H. (2003). A Simple Panel Unit Root Test in the Presence of Cross Section Dependence (Vol. 3). Mimeo: Mimeo, University of Southern California.

Pesaran, M. H. (2007). A Simple Panel Unit Root Test in the Presence of Cross-section Dependence. *Journal of Applied Econometrics*, *22*, 265–312.

Pesaran, M. H., & Smith, R. (1995). Estimating long-run relationships from dynamic heterogeneous panels. *Journal of Econometrics*, *68*(1), 79–113.

Pfeffer, J., & Salancik, G. R. (1978). *The External Control of Organizations: A Resource Dependence Perspective*. New York: Harper & Row.

Pham, P. K., Suchard, J. -a., & Zein, J. (2011). Corporate governance and alternative performance measures: evidence from Australian firms. *Australian Journal of Management*, *36*(3), 371–386.

Phillips, P. C. B., & Sul, D. (2003). Dynamic panel estimation and homogeneity testing under cross section dependence. *Econometrics Journal*, *6*(1), 217–259.

Phung, D. N., & Hoang, T. P. T. (2013). Corporate Ownership and Firm Performance in Emerging Market: A Study of Vietnamese Listed Firms. In *Proceedings of World Business and Social Science Research Conference* (pp. 1–16). Novotel Bangkok on Siam Square, Bangkok, Thailand.

Quah, D. (1994). Exploiting Cross Section Variation for Unit Root Inference in Dynamic Data. *Economics Letters*, *44*(1–2), 9–19.

Rahman, N. A. A., & Reja, A. F. M. (2015). Ownership Structure and Bank Performance. *Journal of Economics, Business and Management*, *3*(5), 483–488.

Ramalho, E. a., Ramalho, J. J. S., & Henriques, P. D. (2010). Fractional regression models for second stage DEA efficiency analyses. *Journal of Productivity Analysis*, *34*(3), 239–255.

Ramanathan, R. (2003). *An Introduction to Data Envelopment Analysis: A Tool for Performance Measurement*. (R. Ramanathan, Ed.) (First). New Delhi l Thousand Oaks l London: Sage Publications India Pvt Ltd.

Randøy, T., & Goel, S. (2003). Ownership structure, founder leadership, and performance in Norwegian SMEs: Implications for financing entrepreneurial opportunities. *Journal of Business Venturing*, *18*(5), 619–637.

Ray, S. C. (2004). *Data Envelopment Analysis: Theory and Techniques for Economic and Operations Research*. (S. C. Ray, Ed.) (First). New York, USA: Cambridge University Press.

Reed, D. (2002). Corporate Governance Reforms in Developing Countries. *Journal of Business Ethics*, *37*, 223–247.

Republic of Kenya. (2015). *The Capital Markets (Foreign Investors) Regulations with 2015 Amendments*. Nairobi, Kenya.

Roodman, D. (2009a). A Note on the Theme of Too Many Instruments. *Oxford Bulletin of Economics and Statistics*, *71*(1), 135–158.

Roodman, D. (2009b). How to do xtabond2: An introduction to difference and system GMM in Stata. *Stata Journal*, *9*(1), 86–136.

Ross, S. A. (1977). The Determination of Financial Structure: The Incentive Signalling Approach. *Bell Journal of Economics*, *8*(1), 23–40.

Rossouw, G. J. (2005). Business Ethics and A Global Survey. *Business & Society*, *44*(1), 32–39.

Rubakula, G. (2014). The New Public Management and its Challenges in Africa. *Public Policy and Administration Research*, *4*(4), 85–97.

Rwegasira, K. (2000). Corporate Governance in Emerging Capital Markets: whither Africa? *Corporate Governance: An International Review*, *8*(3), 258–267.

Sabirianova, K., Peter, K. S., & Svejnar, J. (2005). *Foreign Investment, Corporate Ownership, and Development: Are Firms in Emerging Markets Catching Up to the World Standard?* (No. 1457). Bonn.

Sáez, M., & Gutiérrez, M. (2015). Dividend Policy with Controlling Shareholders. *Theoretical Inquiries in Law*, *16*(1), 107–130.

Samuel, C. (2000). Does shareholder myopia lead to managerial myopia? A first look. *Applied Financial Economics*, *10*(5), 493–505.

Scholten, M. (2014). *Ownership structure and firm performance : Evidence from the Netherlands*. University of Twente.

Schultz, E. L., Tan, D. T., & Walsh, K. D. (2010). Endogeneity and the corporate governance - performance relation. *Australian Journal of Management*, *35*(2), 145–163.

Schulze, W. S., Lubatkin, M. H., Dino, R. N., & Buchholtz, A. K. (2001). Agency Relationships in Family Firms: Theory and Evidence. *Organization Science*, *12*(2), 99–116.

Schwab, K. (2013). *The Global Competitiveness Report 2012-2013*. (K. Schwab, X. Sala-i-Martín, & B. Brende, Eds.). Geneva: World Economic Forum.

Schwab, K. (2014). *The Global Competitiveness Report: World Economic Forum*. (K. Schwab, Ed.) (Full). Geneva: World Economic Forum.

Scott, R. (2003). *Rational, Natural, and Open Systems*. (C. DeJohn, Ed.) (5th ed.). Pearson Education, Inc.

Sharma, M. J., & Yu, S. J. (2015). Stepwise regression data envelopment analysis for variable reduction. *Applied Mathematics and Computation*, *253*, 126–134.

Shleifer, A., & Vishny, R. W. (1986). Large Shareholders and Corporate Control. *The Journal of Political Economy*, *94*(3), 461–488.

Shleifer, A., & Vishny, R. W. (1997). A Survey of Corporate Governance. *Journal of Financial Economics*, *52*(2), 737–783.

Short, H., & Keasey, K. (1999). Managerial ownership and the performance of firms: Evidence from the UK. *Journal of Corporate Finance*, *5*(1), 79–101.

Simmons, C. (2012). Will You Be on Our Board of Directors? We Need Help: Media Corporations, Environmental Change, and Resource Dependency Theory. *Journalism & Mass Communication Quarterly*, *89*(1), 55–72.

Singh, A. (2003). Competition, Corporate Governance and Selection in Emerging Markets. *The Economic Journal*, *113*(491), 443–464.

Singh, D. A., & Gaur, A. S. (2009). Business Group Affiliation, Firm Governance, and Firm Performance: Evidence from China and India. *Corporate Governance: An International Review*, *17*(4), 411–425.

Skoog, G. E. (2005). *Supporting the Development of Institutions – Formal and Informal Rules: An Evaluation Theme Basic Concepts* (UTV Working Paper No. 3). SIDA,UTV WP/3.

Smirlock, M., Gilligan, T., & Marshall, W. (1984). Tobin's Q and the Structure - Performance Relationship. *The American Economic Review*, *74*(5), 1051–1061.

Staal, S., & Brogaard, M. (2011). *Developments in Total Factor Productivity within the Danish Manufacturing Sector: Reallocation, Technical Efficiency and Capital Structure*. Aarhus University, Denmark.

Staiger, D., & Stock, J. H. (1997). Instrumental Variables Regression with Weak Instruments. *Econometrica*, *65*(3), 557–586.

Stein, J. C. (1988). Takeover Threats and Managerial Myopia. *Journal of Personality and Social Psychology*, *96*(1), 61–80.

Stein, J. C. (1989). Efficient Capital Markets , Inefficient Firms : A Model of Myopic Corporate Behavior. *Quarterly Journal of Economics*, *104*(4), 655–669.

Stewart Myers. (1977). Determinants of corporate borrowing. *Journal of Financial Economics*, *5*, 147–175.

Stock, J. H., Wright, J. H., & Yogo, M. (2002). A Survey of Weak Instruments and Weak Identification in Generalized Method of Moments. *Journal of Business & Economic Statistics*, *20*(4), 518–529.

Strobl, E., & Thornton, R. (2004). Do Large Employers Pay More? The Case of Five Developing African Countries. *Journal of Economic Development*, *29*(1), 137–161.

Su, Y., Xu, D., & Phan, P. H. (2008). Principal – Principal Conflict in the Governance of the Chinese Public Corporation. *Management and Organization Review*, *4*(1), 17–38.

Sueyoshi, T., & Goto, M. (2012). DEA environmental assessment of coal fired power plants: Methodological comparison between radial and non-radial models. *Energy Economics*, *34*(6), 1854–1863.

Tavitiyaman, P., Qu, H., & Qiu, H. (2011). The impact of industry force factors on resource competitive strategies and hotel performance. *International Journal of Hospitality Management*, *30*(3), 648–657.

Tayeh, M., Al-jarrah, I. M., Tarhini, A., & Kingdom, U. (2015). Accounting vs . Market-based Measures of Firm Performance Related to Information Technology Investments. *International Review of Social Sciences and Humanities*, *9*(1), 129–145.

Taylor, M. P., & Sarno, L. (1998). The behavior of real exchange rates during the post-Bretton Woods period. *Journal of International Economics*, *46*(2), 281–312.

Thompson, P., & Hung, A. C. (2002). *Cracking the Singapore Code of Corporate Governance: A step towards World-Class Corporate Governance and Superior Performance*. Nottingham University Business School, United Kingdom.

Thomsen, S., & Pedersen, T. (2000). Ownership Structure and Economic Performance in the Largest European Companies. *Strategic Management Journal*, *21*(6), 689–705.

Thomsen, S., Pedersen, T., & Kvist, H. K. (2006). Blockholder ownership: Effects on firm value in market and control based governance systems. *Journal of Corporate Finance*, *12*(2), 246–269.

Tian, L. (2001). *Government Shareholding and the Value of China's Modern Firms* (No. 395).

Titko, J., Stankevičienė, J., & Lāce, N. (2014). Measuring bank efficiency : DEA application. *Technological and Economic Development OF ECONOMY*, *20*(4), 739–757.

Tobin, J. (1969). Equilibrium Approach To Monetary Theory. *Journal of Money, Credit and Banking*, *1*(1), 15–29.

Tone, K. (2001). A slacks-based measure of efficiency in data envelopment analysis. *European Journal of Operational Research*, *130*(3), 498–509.

Torben, P., & Thomsen, S. (2000). The Causal Relationship between Insider Ownership , Owner Identity and Market Valuation among the Largest European Companies. *Strategic Management Journal*, *21*(6), 689–705.

Transparency International. (2017). *Corruption Perceptions Index 2016. Transparency International*. Berlin, Germany.

Tsegba, I. N., & Ezi-Herbert, W. (2011). The Relationship between Ownership Structure and Firm Performance: Evidence from Nigerian Listed Companies. *African Journal of Accounting, Economics, Finance and Banking Research*, *7*(7), 51–63.

Tsionas, M. G., Merikas, A. G., & Merika, A. A. (2012). Concentrated ownership and corporate performance revisited: The case of shipping. *Transportation Research Part E: Logistics and Transportation Review*, *48*(4), 843–852.

Tusiime, I., Nkundabanyanga, S. K., & Nkote, I. N. (2011). Corporate governance : Ownership structure , board structure and performance of public sector entities. *Journal of Public Administration and Policy Research*, *3*(9), 250–260.

U.S. Department of State. (2015). *Uganda Investment climate statement 2015*.

UNCTAD. (2016). *World Investment Report 2016- Investor Nationality: Policy Challenges*. Geneva: United Nations.

UNECA. (2016). *Measuring corruption in Africa: The international dimension matters- African Governance Report IV* (4th ed.). Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.

United Nations. (2009). *Assessing the impact of the current financial and economic crisis on global FDI flows*. *Special Issue*. UNCTAD, United Nations, New York.

United Nations. (2010). *World Economic and Social Survey 2010: Retooling Global Development*. (United Nations, Ed.) (E/2010/50/). New York: United Nations publication.

United Nations Economic Comission for Africa. (2013). Two Decades of Trade Liberalisation and Market Expansion in Eastern Africa: Towards a New Economic Geography?

United Republic of Tanzania. (2014). Capital Markets and Securities (Foreign Investor) Regulation 2014. Dar Es Salaam, Tanzania: Government Printer, Dar Es Salaam.

Van Biesebroeck, J. (2007). Robustness of productivity estimates. *Journal of Industrial Economics*, *55*(3), 529–569.

Velde, D. W. te, & Morrissey, O. (2003). Do Workers in Africa Get a Wage Premium if Employed in Firms Owned by Foreigners? *Journal of African Economies*, *12*(1), 41–73.

Vermeulen, E. P. M. (2013). *"Beneficial Ownership and Control: A Comparative Study - Disclosure, Information and Enforcement", OECD Corporate Governance Working Papers, No. 7, OECD Publishing* (OECD Corporate Governance Working Papers, No. 7 No. No.7).

Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics*, *80*(2), 385–417.

Vintilă, G., & Gherghina, Ş. C. (2014). The Impact of Ownership Concentration on Firm Value. Empirical Study of the Bucharest Stock Exchange Listed Companies. *Procedia Economics and Finance*, *15*(14), 271–279.

Wagner, J. M., & Shimshak, D. G. (2007). Stepwise selection of variables in data envelopment analysis: Procedures and managerial perspectives. *European Journal of Operational Research*, *180*(1), 57–67.

Wang, J. L., Jeng, V., & Peng, J. L. (2007). The Impact of Corporate Governance Structure on the Efficiency Performance of Insurance Companies in Taiwan. *The Geneva Papers on Risk and Insurance Issues and Practice*, *32*(2), 264–282.

Wanyonyi, D., & Tobias, W. (2013). Effects of Corporate Governance on Financial Performance of Listed Insurance Firms in Kenya. *Public Policy and Administration Research*, *3*(4), 1–26.

Waweru, N. M., & Riro, G. K. (2013). Corporate Governance , Firm Characteristics and Earnings Management in an Emerging Economy. *JAMAR*, *11*(1), 43–64.

Weir, C., Laing, D., & Mcknight, P. J. (2002). Internal and external governance mechanisms: their impact on the performance of large UK public companies. *Journal of Business Finance & Accounting*, *29*, 579–611.

Willmore, L. (1986). The Comparative Performances of Foreign and Domestic Firms in Brazil. *World Development*, *14*(4), 489–502.

Wintoki, M. B., Linck, J. S., & Netter, J. M. (2012). Endogeneity and the dynamics of internal corporate governance. *Journal of Financial Economics*, *105*(3), 581–606.

Wooldridge, J. M. (2002). *Econometric Analysis of Cross Section and Panel Data*. (J. M. Wooldridge, Ed.). London, England: The MIT Press, Cambridge, MA.

World Bank. (2009). *United Republic of Tanzania Public Expenditure and Financial Accountability Review 2009 International Standards on Auditing Joint Assistance Strategy for Tanzania.*

World Bank. (2013). *Doing Business in the East African Community.*

World Bank. (2014a). *Doing Business 2014: Smarter Regulations for Small and Medium-Size Enterprises* (10th ed.). Washington, DC 20433, USA: World Bank Group.

World Bank. (2014b). *Doing Business 2014 Regional Profile : East Africa Community (EAC).*

World Bank. (2014c). *Doing Business 2015: Going Beyond Efficiency*. Washington, DC: World Bank Group.

World Bank. (2016a). *Doing Business 2016: Measuring Regulatory Quality and Efficiency*. Washington, DC: World Bank.

World Bank. (2016b). *Doing business 2016: Measuring Regulatory Quality and Efficiency.* Washington, DC 20433: World Bank.

Wright, M., Filatotchev, I., Hoskisson, R. E., & Peng, M. W. (2005). Guest Editors' Introduction Strategy Research in Emerging Economies: Challenging the Conventional Wisdom. *Journal of Management Studies*, *42*(1), 1–33.

Xu, D., & Meyer, K. E. (2012). Linking Theory and Context: "Strategy Research in Emerging Economies" after Wright et al. 2005. *Journal of Management Studies*, (February), 1–40.

Xu, L. C., Zhu, T., & Lin, Y. (2005). Politician control , agency. *Economics of Transition*, *13*(1), 1–24.

Yabara, M. (2012). *Capital Market Integration: Progress Ahead of the East African Community Monetary Union* (WP/12/18 No. WP/12/18).

Yang, M. (2015). Ownership participation of cross-border mergers and acquisitions by emerging market firms. *Management Decision*, *53*(1), 221–246.

Yartey, C. A., & Adjasi, C. K. (2007). *Stock Market Development in Sub-Saharan Africa: Critical Issues and Challenges* (WP?07/209). *IMF - Working paper*. IMF, African Department.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, *40*, 185–211.

Yixiang, Z. (2011). Empirical Research on Ownership Structure and Corporate Performance Based on the Perspective of Dynamic Endogeneity. *Energy Procedia*, *5*, 1878–1884.

Young, M. N., Peng, M. W., Ahlstrom, D., Bruton, G. D., & Jiang, Y. (2008). Corporate Governance in Emerging Economies: A Review of the Principal – Principal Perspective. *Journal of Management Studies*, *45*(1), 196–221.

Young, M. N., Peng, M. W., & Bruton, G. D. (2002). Governing the corporation in emerging economies: a principal-principal perspective. *Academy of Management Proceedings*, 1–8.

Zahra, S. A., & George, G. (2002). Absorptive Capacity : A Review, and Extension. *Academy of Management Review*, *27*(2), 185–203.

Zeitun, R., & Tian, G. G. (2007). Capital structure and corporate performance: evidence from Jordan. *Australasian Accounting Business and Finance Journal*, *1*(4), 40–61.

Zheka, V. (2005). Corporate governance, ownership structure and corporate efficiency: The case of Ukraine. *Managerial and Decision Economics*, *26*(7), 451–460.

Zheka, V. (2006). *Corporate Governance and Firm Performance in Ukraine*. *Cntre Economic Reform and Transformation* (Vol. xxx).

Zhou, Q., Faff, R., & Alpert, K. (2014). Bias correction in the estimation of dynamic panel models in corporate finance. *Journal of Corporate Finance*, *25*, 494–513.

Zhu, H., Xia, J., & Makino, S. (2015). How do high-technology firms create value in international M&A? Integration, autonomy and cross-border contingencies. *Journal of World Business*, *50*(4), 718–728.

Zimková, E. (2014). Technical Efficiency and Super-Efficiency of the Banking Sector in Slovakia. *Procedia Economics and Finance*, *12*(March), 780–787.