

Drivers of Organizational Performance: A State-Owned Enterprise Perspective

for presentation at the Biennial conference of the Economic Society of South Africa, University of the Free State, Bloemfontein, South Africa, 25-27 September

Mbako Mbo

*University of Stellenbosch Business School,
Carl Cronje Drive Bellville 7535
Cape Town, South Africa.*

Charles Adjasi¹

*University of Stellenbosch Business School,
Carl Cronje Drive Bellville 7535
Cape Town, South Africa.*

Abstract

This paper examines empirical evidence on SOE performance drivers and thus contributes to understanding the literature behind SOE performance as well contributions to policy formulation on such organizations. Data from annual reports of 24 SOEs selected from 9 countries across 7 industries in a regression model empirically estimated using linear mixed model within the framework of longitudinal data analysis. The study finds that in an SOE set up, good firm performance is driven by existence of strong boards, good liquidity position and independent industry regulation. Firm size and age are also found to be positively driving performance whilst gearing levels, government's involvement in pricing, attempting to cater for all stakeholder interest and financial dependence on government are negatively related to performance of SOEs. Our study brings no conclusive result on the effect industry competition has on SOE performance. We conclude that SOE performance can be explained in terms of the following organizational theories: resource based theory, agency theory, stewardship theory and the public choice theory whereas the stakeholder theory does not hold in an SOE set up.

¹ All correspondence to charles.adjasi@usb.ac.za

1.0 Introduction

The debate on the relevance of State Owned Enterprises (SOEs) in Africa has been around for some time, dating as far back as early 1950s and gaining momentum throughout sub-Saharan Africa by the 1980s (Etukudo, (1997). However to date such debates have concentrated on SOE ownership structures, managerial autonomy, commercialization and privatization and thereby missing on a very central issue; what are the factors driving good SOE performance? The quest in the academic literature as well as in policy endeavors to explain SOE performance has not yielded much consensus, given the inability of certain theories to adequately explain SOE performance (Bozec *et al*, (2002). Whilst empirical evidence exists on how well and/or poor SOEs have performed over the years, what remains largely unresolved, at least in the context of sub Saharan Africa, is a comprehensive test of what factors drive good SOE performance? Of equal importance is an examination of the rather contending organizational theories to determine how they combine to explain and predict organizational performance of SOEs, these are gaps this paper intends to fill.

Whilst various countries have, in concert with the agency theory embarked on performance contracts in an effort to improve SOE efficiency these have failed fundamentally because such attempts have underestimated the implications of other competing theories which explain organizational performance. Chile provides a good example where contradictions amongst such competing organizational performance theories were revealed, whilst exemplary efficiency of SOEs was brought about in compliance with the tenets of the agency theory (boards were trimmed and made more efficient, management roles more defined etc.), the provisions of the stewardship theory were rather undermined (board oversight functions were strengthened, management supervision was more evident etc.). On the other hand, good performance was ensured through restrained political influence with boards being held more accountable, a scenario supported under the public choice theory, however socio economic dimensions coming with the existence of SOEs were ignored and thereby giving much less attention to the needs and interest of various stakeholders (Shirley, (2008).

Another example lies in a study by Mwaura (2007) who, consistent with Toninelli (2000) blames poor performance of Kenyan SOEs on poor performance by the boards, and attributes their inability to resolve the agent-principal problem because of the existence of multiple agents (managers, state and public officials). However, attempting to resolve the agency problem purely by giving the boards autonomy will test the principles of the public choice theory, as such board are appointed by political leadership to facilitate political millage through directives not necessarily in the best interest of the SOE's performance (Mwaura, (2007).

SOEs are generally associated with a dark history of poor performance (Boko & YuanJan, (2011), thereby prompting governments to focus on privitisation which also got a push from DFIs. Unfortunately existing empirical evidence is not so conclusive in projecting privitisation as a solution to poor performance of SOEs and many studies continue to find no causal relationship between privitisation and better firm performance (Fritz & Menocal,(2006) , Buchs, (2003), Omran, (2001), Omran, (2002), Kanyoma, (2008), Cheelo & Mwanalula (2005).

In the midst of these, compelling evidence continue to indicate that as old business concepts as they are, SOEs still remain relevant in today's economies. SOEs account for 20% and 5% of global investments and total employment respectively and up to 40% of total output in some countries (World Bank, (2007). There exist a good number of examples of SOEs that have, and continue to bring desired results to their economies. In many OECD countries SOEs have for some time represented a substantial part of GDP, employment and market capitalization, such entities have been prevalent in key sectors such as energy, transport and telecommunications whose performance is critical to broad segments of the population and other parts of the business sector (OECD, (2005). A good number of successful SOEs include the multi award winning Singapore Airlines Brazil's EMBAER, the French Renault, Korean POSCO and the highly respected Indian Bombay Transport Authority Cheng (2007). Similarly Qatar airlines voted the World's best airline of 2011 (SkyTrax,(2011) is a major player in the country's economy with a majority shareholding by the Government. The importance of SOEs is felt particularly on infrastructural development, with a majority of infrastructural services being delivered by SOEs ahead of a 20% to 25% contribution by the private sector (Vagliasindi, (2008).

These are all relevant facts which policy discussions and debates cannot continue to ignore, particularly so in the context of the relatively less developed sub-Sahara Africa where SOEs continue to operate virtually in all sectors, Kikeri and Kolo (2006). It is therefore of paramount importance that factors affecting performance in these critical entities are well comprehended and so in the context of a framework of well-founded organizational theories.

A number of empirical studies have been performed in Africa in the subject of SOE performance, but more often focusing on how privatization affects organizational performance as opposed to what fundamentally drives such performance. In that regard, Marandu (2003) examines how privatization affects SOE performance in Dar-es-Salaam and finds no significant improvement on firm performance purely attributable to privitization. Kanyoma, (2008) using a 10-year data to investigate performance trends before and after privatization also fails to establish any material positive impact privatization has on firm performance, the same goes for a Ghana based study by Ntiri, (2010). Other similar studies

conducted in this area (Cheelo & Mwanalula, (2005), Mosoke, (2008), Omran, 2001, Clive (2004) also does not really assist in defining factors to consider if SOE performance is to be improved and how performance could be explained and predicted in terms of existing organizational theory.

On a study that compares organizational performance before and after privatization, (China provides a very good case of the good that can come with the embracing of SOEs through corporatization as a policy alternative to pure privatization (Aivazian et al, (2005). Even then, such corporatization has to come with and be backed by a solid understanding of how to run self-sustaining SOEs and this has to be informed by a reflection on what drives good performance and how existing theory explains and predict such performance.

This paper examines the fundamental drivers of SOE performance in Africa and seeks to contribute to literature and policy discussions on SOEs by uniquely combining various management theory lenses. The paper tests various theories: the agency theory (Jensen & Meckling, (1976, Eisenhardt, (1989), public choice theory (Niskanen, (1971); Tullock, (1976); Krueger (1990), stewardship theory (Donaldson ,(1990); Barney ,(1990), the stakeholder theory (Freeman, (1994) and the resource based theory (Hamel & Prahalad,(1994) to establish the drivers of SOE performance. It uses data from SOEs from the period 2001 and from seven (7) sectors and nine (9) countries. The data is sourced from SOE audited annual financial statements, enabling acts of Parliament and publicized annual reports. The paper utilizes panel data estimation framework to analyze the effect of a number of variables on SOE performance. The paper brings clarity to the seemingly contradicting theories that have for years been used to explain and predict organizational behavior. The rest of the paper is structured as follows; the next section reviews relevant literature, followed by a section on methodology, a discussion of results and a conclusion respectively.

2.0. Review of Literature

2.1. SOEs and the Agency theory

The agency theory by (Jensen & Meckling, (1976) and Eisenhardt, (1989) remain very popular amongst many modern day researchers in examining and explaining governance relationships between the owners of the firms and those entrusted with the responsibilities of managing it. In principal and agent relationships the problem that typical arises is when the agent fails to balance their own interests with those of the owners and hence the board of directors are often expected to play an oversight role, keeping in mind the interest of the principal. In the case of SOEs, however, the difficulty of defining the ultimate principals at SOEs hinders the development of appropriate mechanisms for aligning the agent's interest with the principal's (Wicaksono, (2009), this problem is also noted in Toninelli, (2000) who labeled SOEs managers as 'agents without principals'. As much as the owner of SOEs is in all most all cases is

clearly identified as the state, a confusion often arises as to who is representing the state, is it the central government, local government, bureaucrats or the general public? The significance of the agency problem in the case of SOE is also emphasized by (Li and Xia, (2007) who blames it on the inability of the Principal to monitor the agent. Empirical evidence have shown that the agency theory's mal-functionality tend to be more pronounced in cases of making managerial choices under uncertainty (Ross, (1973), such uncertainty quite often exist in the cases of SOEs where managerial choices (biased towards better economic performance) may not fuse well with those of the principal, the state, which may be leaning towards socio-political goals.

Whilst in agreement with Ross, (1973) and Leech, (1986) that an agency problem will ensue whenever business preferences of the agents and principals are at variance, (Ongore and K'Obonyo, (2011) posit that the use of strong and effective boards can overcome this as they become intermediaries with an oversight fiduciary function. However, earlier empirical evidence in the case of Chinese and Indian SOEs has shown that it is not always practical for boards to act against the will of a dominant shareholder (Rajagopalan and Zhang, (2008). The state is in all cases the dominant shareholder in SOEs and thus, it's will and power always sees the light of the day, implying that the public choice theory will almost certainly reinstate itself even in cases where there has been deliberate efforts to keep high standards of governance requisite in dealing with the agency-principal problem.

2.2. SOEs and the Stakeholder theory

The stakeholder theory popularized by (Freeman, (1994) is underpinned by the assumption that values are necessarily and explicitly part of doing business and put pressure on management to articulate the manner in which they want to conduct business with what brings core stakeholders together in mind. Under this theory organizational behavior [and performance] is said to be predicted and explained on the basis of its stakeholders, their values, their relative influence on decisions and the organizational situation, (Brenner & Cochran, 1991, cited in Jones and Wicks, (1999). The fact that this theory demands managers to reconcile the needs of all core stakeholders in the way they run business makes it even more appealing to an SOE set up where stakeholders are divergent in needs and objectives including those of a social nature along with the profit motives (Wicaksono, (2009). Although this theory sought to describe and explain specific corporate characteristics and behaviours, it suffers from not realizing the fact that stakeholders may be multiple and possess conflicting interests (Donaldson and Preston, (1995). In such a situation is it

feasible for interests of all stakeholders in a typical SOE to be well reconciled in order to achieve a sustained organizational performance?

2.3. SOEs and the Stewardship theory

The Stewardship theory (Donaldson and Davies, 1989; Donaldson, 1990; Barney, (1990) postulates that managers are good stewards of the firm, want to perform well and cooperate with all stakeholders for a common goal of attaining the firm overall firm objectives (Wicaksono, (2009), the stewardship theory therefore proposes that trustworthy and cooperative relationships between principals and stewards are positively correlated with firm performance (Tian and Lau, (2001). This view is supported by (Yang et al, (2009) who find that in the modern world, the relationship between the board and the CEO is no longer a supervisor and supervisee one but rather a cooperative engagement. Do such arrangements survive in an SOE set up where political influence can overrule? Do management and boards wither political pressures exerted on them by powerful political leaders who, in most cases appointed them?

2.4. SOEs and the Public Choice theory

The public choice theory makes an assumption that although political leadership has some concern for the interest of others; such concern is minimal as the primary interest they serve is their' s. SOEs are state's own vehicles for service delivery, and since states are run and directed by politicians, it follows that politicians may have an upper hand in the direction of SOEs. A key underpinning of the public choice theory is the lack of incentives by voters to monitor the actions of the government [and politicians in general] (Shaw, (2008). This lack of incentive is often blamed on a rational ignorance on the part of the voters (Anthony, (1957, cited in Shaw, (2008) and thus weakens incentive for good management in public interest.

A further problem arises under this theory where focus is diverted to achieving socio political goals [in some cases for political expediency] to the detriment of financial performance (Bozec et al, 2002). This was also established by (Kathrn et al, (2001) who finds that government owned firms tend to forgo maximum profits in pursuit of socio political objectives. This detriment of political control over SOEs is corroborated by empirical evidence from a study by (Xu et al, (2001) which found that the success of SOE restructuring in China was dependent upon lessening of politician control. A study by (Bortolotti & Pinotti, (2008) concluded that successful alternatives to SOE privatization depended mainly on the will and the power of the politicians governing the country, however such politicians, at least according to the public choice theory, do have the power and will act in their own best interest due to weak oversight placed on them.

2.5. SOEs and the Resource Based Theory

The RBT was popularized by among others by (Hamel & Prahalad, (1994) who pictured organizations as bundles of resources which, depending on how they are uniquely combined make one firm perform better than the next. Consistent with such a proposition, (Grant, (1991) holds a view that firm's resources are its primary source of good performance. A study by (Makhija, (2003) does confirm that resources provide a distinct competitive advantage catalyst to good organizational performance.

A good number of authors (Wernerfelt, (1984), Hoskisson et al, (2000), Caldeira, 2001, Makhija, (2003) etc) are in agreement that firm resources (both tangible and intangible) are meaningful firm performance drivers only if they are 1) valuable, 2) rare, 3) imperfectly imitable and 4) not perfectly substitutable. (Makhija,(2003) takes the theory a step further by emphasizing on what he calls 'competitive capability', this, he explains is made up of three primary components, a)Knowledge of underlying efficiency, b)Entrepreneurial ability and c) a firm's Institutional networks and administrative heritage. Clearly, components a) and b) are tacitly residing within the firm's management itself and as such, constitute part of a firm's intangible resources. SOE's presents a very interesting case with respect to the RBT. It is very noble that resources do provide above average performance if they are rare and imperfectly imitable, in many cases SOEs still remain monopolies under legislation, giving them sole and exclusive rights to own and operate specialized assets, typical examples include power transmission assets owned by electricity corporations and telecommunication transmitters owned by telecommunication corporations operating in restricted industry environments, are these SOEs taking advantage of the rare and imperfectly imitable resource they have?

2.6. Theory compatibility

Whilst under the agency theory, corporate governance measures have over the years developed to guard the actions of the supposedly self-centered managers [agents] against relegating the principals interest, the agency problem continues to exist in the SOE scene mainly because it is rarely clear who precisely represents the principal [state] (Toninelli, (2000). There have however been some cases where the politicians, acting as the principal has exerted enough pressure on SOEs and put in place enough incentives and policies that fully supported agents to act in the principal's interest. On the other hand, some SOE failure cases have been attributed to the agency problem itself (Fudanga & Mwaba, (2006) and Mwaura, (2007),

Under the public choice theory, SOEs have been thought to fail as a result of excessive influence of politicians on the decision making and operations of such enterprises, such political figures having been appointed to office by the voting public which in turn does not have any motive to monitor their decisions and performance (Mwaura,(2007). This theory therefore, tends to imply that SOEs will operate in line with the interest of the politicians and not necessarily on management's self-interest thereby undermining the core principles under the agency theory, the result of which would be poor performance (Brouthers *et al*, (2007). Etukudo, (1997) in agreement with Bozec *et al*, (2002) argues that SOEs can be steered towards good performance provided their relations with governments are well defined; this is suggestive of a public choice theory- induced problem.

The stakeholder theory holds that in an organizational set up, interests of all stakeholders should be reconciled and managed in a manner that brings about optimal firm performance, it has been established that in an SOE set up such interest can be difficult to reconcile as the stakeholders are diverse in nature and possess very divergent interests (Heath,(2004). The public choice theory on the other hand seems to be in conflict with the view that stakeholder interests can be reconciled as it clearly views political interests as possessing supreme influence to the detriment of good performance (Mwaura, (2007).

The stewardship theory views managers as good wardens of the principals who will always act in the best interest of such principals, the agency problem (under the agency theory) has been proven in a good number of cases (Liang *et al*, (2012) and Qian (1996), with managers acting not in the best interest of the enterprise owners but rather on that of their own, or worse even in the interest of powerful politicians.

The discussion above indicates that factors affecting and influencing SOE performance are diverse and no single theory has been conclusively found to best explain predict and them. There is thus a clear case of a gap and conundrum in literature and subsequently in policy in explaining SOE performance. This gap and conundrum is what the current thesis aims at filling and explaining.

2.7. Empirical Literature

A number of empirical studies exist on SOE performance. These include a study by the World Bank (2007) that identifies five governance related problems that have persistently led to SOEs poor performance in the developing world. The identified governance problems which in essence are agency theory related were unclear ownership objectives, weak owners, low transparency levels, lack of professionalism of the boards and poor stakeholder relations.

In their study investigating the effect of market structure on SOE performance, (Goldeng *et al*, (2004) established competition as a determinant of performance; specifically that competition can be detrimental to SOE performance, this is consistent with other literature suggesting that operational margins tend to be depressed with competition (Perevalov *et al*, (1999). Reliance on state debt finance has been found to be negatively correlated to performance of state enterprises, in support of the resource based theory, an efficient use of resources has been found to improve SOE performance (Majumdar, (1996). Whilst (Berg *et al*, (2005) establish industry regulation to be an influential factor in the Ukraine electricity industry, they also find SOEs to be less responsive to any regulatory related incentives than their private sector counterparts and this is said to be mainly due to political pressures that tend to disincentivise SOE managers.

(Kim & Chung,(2008) established a positive correlation between government pressure on 22 SOEs and their performance outcomes in Korea. The authors found empirical evidence to the effect that with appropriate pressures from government, SOEs can perform even if there is no intention to privatize. This is consistent with empirical evidence by (Aivazian et al, (2005) who found that in China, corporatization of SOEs improved their performance without an element of privatization. (Moushibahou, (2010) also finds through an empirical study that in Hungary, Poland and the UK, firms improved performance during a period leading to privitisation and not necessarily thereafter, meaning that indeed with appropriate pressures from the relevant stakeholders SOE performance can be improved without privitisation. The author further finds that unlike within OECD countries where privitisation resulted in marginal performance improvement privatised African firms reported no significant improvements in performance (measured by profitability, efficiency, output and leverage).

3.0 Methodology and Empirical Analysis

3.1 Data

As shown in Table 1, the data is on twenty four (24) SOEs from nine African countries operating in seven (7) different industries and covers a period from 2001 to 2012, thus giving it a panel framework. . SOEs considered are only those where government has a shareholding in excess of fifty percent. The study takes only SOEs whose principal source of revenue is customer charges (fares and tariffs), as such it excludes government agencies which, although semi-autonomous depend materially on subventions and other forms of government budget.

Table 1: Countries and Industries Covered in the Study

<i>By Country</i>		<i>By Industry</i>	
<i>South Africa</i>	<i>8</i>	<i>Power</i>	<i>5</i>
<i>Botswana</i>	<i>5</i>	<i>Postal</i>	<i>3</i>
<i>Namibia</i>	<i>3</i>	<i>Telecommunications</i>	<i>3</i>
<i>Mauritius</i>	<i>2</i>	<i>Water & Sannitation</i>	<i>6</i>
<i>Swaziland</i>	<i>1</i>	<i>Airlines</i>	<i>4</i>
<i>Lesotho</i>	<i>1</i>	<i>Rail & Transport</i>	<i>2</i>
<i>Kenya</i>	<i>1</i>	<i>MiningServices</i>	<i>1</i>
<i>Ethiopia</i>	<i>1</i>	<i>Total</i>	<i>24</i>
<i>Malawi</i>	<i>1</i>		
<i>Ghana</i>	<i>1</i>		
	<i>24</i>		

Data on the SOEs constituting the sample is predominantly obtained from the audited annual financial statements and other publicized annual reports of these entities. This information has been obtained from the websites of the SOEs, where available whilst in some cases hard copies have been formally requested and granted. The audited annual financial statements mainly provide quantitative data whilst the rest of qualitative information is mainly available from narratives in the annual reports (e.g. size of work force, extent of stakeholder reporting, strength of the board etc.).

The study also refers to relevant legislation and/or applicable industry policy framework within the countries providing the sample SOEs. Such includes enabling acts of parliament which, in most cases exist to first and foremost establish the SOEs, specify their mandate and purpose, powers and governance, among others. The regulatory framework (or lack thereof) of industries in which the SOEs in sample operate is also ascertained through the perusal of relevant acts of parliament, and through such very pertinent data is obtained and this concerns the pricing mechanisms, competition and competitive practices and issues of consultation, among others.

The study variables are defined and measured as per table 2 below, which also indicates their predicted relationships with firm performance:

Table 2: Definition of variables and their predicted relationship with performance

Variable	Measurers	Predicted relationships
Liquidity (LIQ)	$= \frac{\text{Current Assets}}{\text{Current liabilities}}$	Higher liquidity is positively related to performance
Gearing (GEA)	$= \frac{\text{Debt Capital}}{\text{Debt Capital} + \text{Equity Capital}}$	Higher gearing is negatively related to performance
Workforce (WKF)	$= \text{total headcount}$	Size of workforce is positively related to performance

Extent of Government's Involvement in Pricing Decisions (GPD)	<p>Score =0 if Tariffs and related pricing are subject to final approval by government</p> <p>Score = 1 if pricing is left to market forces, including where regulation is by an independent body)</p>	The extent of government involvement is negatively related to performance
Existence of Competition (COMP)	<p>Score =0 if there is no service provider or products which are perfect substitutes to what is offered by the SOE</p> <p>Score =1 if there is 1 or more service providers or products which are perfect substitutes to what is offered by the SOE</p>	Competition is positively related to performance
Strength of Board (BDS)	<p>Score = 5 if board has within it the following skills: i) industry specific ii) Financial management iii) Environmental and social Management iv) Legal v) Human Capital Management v)</p> <p>Score = 4 if only 4 of the above</p> <p>Score = 3 if only 3 of the above</p> <p>Score = 2 if only 2 of the above</p> <p>Score = 1 if only 1 of the above</p>	Strength of boards is positively related with performance
Extent of Stakeholder representation on board (STKRB)	<p>Score = 5 if board has within it representatives from the following : i) Public Sector ii) Private Sector iii) Civic Organizations iv) Legal v) General Public</p> <p>Score = 4 if only 4 of the above</p> <p>Score = 3 if only 3 of the above</p> <p>Score = 2 if only 2 of the above</p> <p>Score = 1 if only 1 of the above</p>	Wider stakeholder representation on boards is positively related to performance
Extent of Stakeholder Reporting (STKRB)	<p>Score = 5 if annual reporting extensively cover the following areas: i) Financial Outcomes ii) Human Capital Issues iii) Corporate Social Responsibility iv) Environment, climate change and social issues) v) operational reviews</p> <p>Score = 4 if only 4 of the above</p> <p>Score = 3 if only 3 of the above</p> <p>Score = 2 if only 2 of the above</p> <p>Score = 1 if only 1 of the above</p>	Extensive stakeholder reporting is positively related to performance
Financial Dependency on Government (FINDEP)	<p>= measured by the proportion of government's capital (shares of all classes and/or equivalent) to total</p>	Dependence on government is negatively related to performance

	<i>shareholder funds (including accumulated retained earnings/losses)</i>	
Existence of an independent industry regulator (REG)	<i>= When there is a recognized industry regulator dully enacted by an act of parliament, and its decisions are not subject to automatic review by government</i>	Existence of an independent regulator is negatively related to performance
Age (AGE)	<i>= number of years the SOE has been in operation as an SOE (excludes any number of years the entity may have operated as a government department)</i>	Age and SOE performance are positively related

3.2. Measure of Performance

Various studies have measured performance in different way, with some focusing on productivity and profitability (Majumdar, 1997, Menozzi and Urtiaga, 2009, Xu *et al*, (2001) whilst some attempt to use more broad based measures encompassing operational efficiency, productivity, employment, output and value creation (Cheung *et al*, (2012), Kanyoma, (2008), Omran, (2001), Omran, (2002), Clive,(2004) etc). We attempt to combine both profitability and efficiency measures by defining performance in terms of Profitability, Return on Assets, Capital Productivity (Asset Turnover), Value Created per equity, labour productivity (Revenue per employee) and operational efficiency (debtor and creditor days). Whilst other measures like customer satisfaction, delivery on social objectives and rate of access to services would have been more ideal, this could not be fit into the context of this study since these are industry specific and that would warrant a separate study.

3.3. Model Estimation

We adopt the model proposed by (Deventer and Malatesta, (2001) and adopted by Bozec *et al*,(2001). This model is augmented by allowing for a vector of organizational theories which are then operationalized through a number of proxy variables and we test our hypothesis using a regression model as follows:

$$Y_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 WKF_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \varepsilon \quad (1)$$

Where;

Y = SOE performance-the dependent Variable

LIQ = Liquidity

GEA = Gearing

GPD =Extent of Government's involvement in pricing decisions

FDP = Extent of financial support from Government

$COMP$ =Existence/nonexistence of industry competition

BDS = Board Score

$STKR$ = Extent of Balanced stakeholder reporting

$STKR$ = Extent of stakeholder representation on Board

SIZ = Size

$FINDEP$ = Financial Dependency on government

$Control$ = This is a variable that might affect SOE performance, age (as measured by the number of years in operation)

ε = Error term

The regression model proposed above has been empirically estimated using linear mixed model within the framework of longitudinal data analysis. Linear mixed modeling approach was selected because of the two main reasons: first, its flexibility of handling both time variant and time invariant variables in the model, second the need to control for unobserved heterogeneity across the firms and countries. The estimation was done using STATA version 13. The linear mixed model approach adapted here is mainly used in natural science. However, at least in theory it is expected to produce equivalent results to standard panel data approach. The choice of the mixed model is motivated by the need to include time invariant variables especially industry in our model which is not accommodate by a standard fixed model using panel approach. The econometric formulation of the model is as follows: $Y_i = X_i\beta + Z_i\nu_i + \varepsilon_i$

Where $i = 1 \dots N$ firms

$j = 1 \dots n_i$ observations for firm i

$Y_i = n_i \times 1$ response vector for firm i

$X_i = n_i \times p$ design matrix for the fixed effects

$\beta = p \times 1$ vector of unknown fixed parameters

$Z_i = n_i \times r$ design matrix for the random effects

$V_i = r \times 1$ vector of unknown random effects $\sim N(0, \Sigma_v)$

$\epsilon_i = n_i \times 1$ error vector $\sim N(0, \sigma^2 I_{n_i})$

Separate regression equation was estimated for each of the Performance measures as demonstrated below (All monetary figures have been converted to the USD equivalent):

$$RoA_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \epsilon \quad (2)$$

: Where RoA is Return on Assets measured as Operating Profits/Book Value of Capital Assets

$$Asset\ Turnover\ Ratio_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \epsilon \quad (3)$$

: Where Asset Turnover Ratio is measured as Total Revenue/Book Value of Capital Assets

$$Revenue\ per\ employee_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \epsilon \quad (4)$$

: Where Revenue per employee is measured as Total Operational Revenue/ Total number of full time employees

$$Value\ Created\ Per\ Equity_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \epsilon \quad (5)$$

: Where Value created per equity is Total Value Created / Total Equity (Including Retained shareholder funds)

$$Debtor\ Days_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ_{it} + \beta_{10} FINDEP_{it} + \lambda(control) + \epsilon \quad (6)$$

: Where Debtor Days is calculated as (Trade Payables/Total operational Revenue)*365

$$Creditor\ Days_{it} = \alpha_1 + \beta_1 LIQ_{it} + \beta_2 GEA_{it} + \beta_3 GEA_{it} + \beta_4 GPD + \beta_5 FDP_{it} + \beta_6 COMP_{it} + \beta_7 STKR_{it} + \beta_8 STRP_{it} + \beta_9 SIZ + \beta_{10} FINDEP_{it} + \lambda(control) + \varepsilon \quad (7)$$

: Where Debtor Days is calculated as (Trade Payables/Total operational Revenue)*365

3.4. Operationalization of Organizational theories and hypothesis

Table 3: Summary of proxy variables per theory

Underpinning theory	Proxy variable
Resource Based Theory	Liquidity
	Gearing
	Size
Stewardship Theory	Extent of Government's Involvement in Pricing Decisions
	Existence of Competition
Agency theory	Strength of Board
Stakeholder Theory	Extent of Stakeholder representation on board
	Extent of Stakeholder Reporting
Public Choice Theory	Financial Dependency on Government
	Existence of an independent industry regulator
Control Variable	Age

i) Resource Based Theory

This theory asserts that organizations are bundles of resources, and how much resources an entity has will determine how good a firm may perform (Grant, (1991). Organizational resources vary in nature; our study selects both financial resources (as measured by financial strength, i.e. Liquidity and Gearing) as well as non-financial resources (size of workforce). If the Resource Based Theory holds, SOEs with more of these resources will perform better than those with less. Higher liquidity levels (measured as a ratio of current assets to current liabilities) would imply that the SOE has more financial resources (short term) to take advantage of favourable supplier terms, avoid short term financing costs, take advantage of business opportunities as and when they arise, raise finance income etc. On the other hand, the higher the gearing ratio (i.e. proportion of debts to total capital employed) is, the more an SOE relies on borrowed financing resources, which normally would not only come at a cost but also with restrictive conditions, and thus becoming a deterrent to good performance. Similarly, assuming efficiency, SOEs with a larger workforce would have access to a wider range of skill and expertise and stand a better chance to respond to business needs than the ones with less, and hence perform better.

Hypothesis: The more resources a firm has, the better will be its performance.

ii) Stewardship theory

With this theory, the position is that managers are good stewards and will always act in the best interest of the entities they lead and towards good performance. This theory further postulates that trustworthy and cooperative relationships between principals and stewards are positively correlated with firm performance (Tian and Lau, (2001). Our study takes the view that under this theory, the level of influence and control principals, being the government (and by extension the public) have on the stewards can among other things be judged by the government's direct involvement in pricing and financing decisions as well as whether competition has been allowed in a given industry. The stewardship theory will be confirmed in cases where the government is minimally involved in pricing decisions and the industry has been opened to competition, and the expectation will be that the stewards (the managers) will focus on driving good performance. A score of 0 is awarded when tariffs and prices levied by SOEs are subject to final approvals by the political leadership, the score is changed to 1 in cases where such pricing is left to competitive forces (in most cases with an element of independent industry regulation). Government's direct involvement in pricing decision is expected to lower performance. On the other hand, competition is deemed to exist where there is at least one provider of similar or perfect substitute products and services. A score of 1 represents competition and a 0 signifies lack of competition.

Hypothesis: Performance will be better in SOEs where much is left to the stewards to run operations.

iii) Agency Theory

The agency theory holds the view that in organizations there exists an agent-principal problem, this being caused by the agents (managers of the organizations) focusing on their own interest to the detriment of organizational goals. In many cases the interests [and needs] of the agents do not reconcile with those of their principals thereby fueling the agent-principal problem (Ross, (1973) and Leech, (1986), and this takes a strong board to resolve (Ongore and K'Obonyo, (2011). However, a board of directors can only be as effective as it is strong. In this study, the strength of the board is measured in terms of the extent of diversity amongst board members (education and professional discipline) as well as the existence of sub committees, a score ranging between 1 and 5 is then assigned where 5 is assigned to a board deemed to be very strong as indicated in Table 2 above. Performance is expected to be better amongst SOEs with strong Boards.

Hypothesis: The stronger the Boards of SOEs, the better the performance.

iv) Stakeholder theory

At its core, this theory is based on the premise that values are an absolute necessity in doing business. According to the proponent, (Freeman, (1994), such values must be reflective of reconciled needs and interest of all stakeholders of an entity. Ordinarily, for this theory to hold, better performing SOEs will be those that incorporate interest of all their stakeholders in the way they do business. This theory is of particular interest in an SOE set up, where organizational objectives, hence stakeholder interests may conflict with each other (e.g. financial Vs Social). Our study measures this by two perspectives namely the extent of representation of various stakeholders on the board and the extent to which annual reporting captures interest of all stakeholders. The study considers stakeholder representation on boards to be high when the following groups are represented; public sector, private sector, general public and civic organizations. Similarly, the study considers the extent to which SOE annual reporting is sensitive to the needs of various stakeholder by extensively covering the following areas; environmental and social perspectives, corporate social responsibility, corporate governance, financial and social. Scores ranging between 1 and 5 are assigned, where 5 is the highest (See table 2 above). SOEs which have a broader representation of stakeholders in their boards and produce annual reports that are sensitive to needs of various stakeholders will perform better.

Hypothesis: SOEs capturing interests of all their stakeholders will perform better than those which does less so.

v) Public Choice

This organizational theory appeals very much to an SOE set up, it posits that although players in the political scene have some concern for the interest of others; such concern is minimal as the primary interest they serve is theirs. SOEs are state's own vehicles for service delivery, and since states are run and directed by politicians, it follows that politicians may have an upper hand in the direction of SOEs. Studies (Kathrn et al, (2001)and Bozec et al, (2002) have found that in SOEs focus can be diverted to achieving socio political goals [in some cases for political expediency] to the detriment of sustainable performance. Our study considers the extent of government's stake compared to total equity position, with a higher level of equity held by government being indicative of a higher degree of dependence on government resources (See table 2 above), and hence a presumed higher level of political control and influence. On the other hand, the existence of an independent regulator duly established under laws and whose decisions are not subject to further government approvals is taken to be indicative of lessor political influence and control over SOEs being regulated.

Hypothesis: Performance will be better where there is less political influence

4. Results

Table 4a summarizes the key statistics and results for six regression models are presented in tables 4b and c. The SOE performance measurements are presented in the third to six column and the first column represents the theoretical underpinning and the row represents the independent variables included in the model. In most occasion, age, size, extent of government involvement in pricing decision and extent of stakeholder representation on board and gearing have a significant negative influence on performance for most of the proxies used.

Table 4b: Regression Results (Statistical Significance at $(p < 0.1)$).

Underpinning theory	Proxy variable	<i>Return on Assets</i>	<i>Asset Turnover</i>	<i>Revenue per employee</i>	<i>Value Created Per equity</i>	<i>Debtor Days</i>	<i>Creditor Days</i>
Resource Based Theory	Liquidity	0.0058 (0.476) 207**	-0.369 (0.677) 207**	5.039 (0.040) 207**	3.980 (0.191) 207**	-1.1431 (0.882) 207**	3.829 (0.031) 207**
	Gearing	-0.2940 (0.007) 207**	0.5283 (0.673) 207**	-83.618 (0.033) 207**	60.279 (0.193) 207**	-11.89 (0.433) 207**	-51.484 (0.061) 207**
	** Number of observations Size	.0044 (0.065) 207**	-0.985 (0.000) 207**	-0.675 (0.440) 207**	3.577 (0.000) 207**	0.638 (0.025) 207**	1.735 (0.001) 207**
Stewardship Theory	Extent of Government's Involvement in Pricing Decisions	-0.3041 (0.000) 207**	-7.083 (0.000) 207**	8.100 (0.798) 207**	10.7 (0.432) 207**	-18.31 (0.000) 207**	-79.85 (0.000) 207**
	Existence of Competition	0.0102 (0.965) 207**	.2591 (0.915) 207**	10.100 (0.877) 207**	-26.674 (0.743) 207**	61.026 (0.017) 207**	-112.124 (0.017) 207**
Agency theory	Strength of Board	-0.0224 (0.546) 191**	-1.951 (0.000) 191**	134.84 (0.000) 191**	63.195 (0.011) 191**	23.627 (0.007) 191**	18.303 (0.235) 191**
Stakeholder Theory	Extent of Stakeholder representation on board	-0.02186 (0.0398) 207**	-0.7993 (0.016) 207**	-45.443 (0.001) 207**	57.670 (0.000) 207**	41.921 (0.000) 207**	10.673 (0.257) 207**
	Extent of Stakeholder Reporting	-0.0068 (0.728) 207**	-1.145 (0.598) 207**	1.954 (0.770) 207**	-14.52 (0.066) 207**	-1.559 (0.549) 207**	-10.239 (0.029) 207**
Public Choice Theory	Financial Dependency on Government	-0.0215 (0.004) 204**	0.0159 (0.838) 204**	1.466 (0.481) 204**	4.923 (0.61) 204**	-0.297 (0.0719) 204**	-0.9583 (0.529) 204**
	Existence of an independent industry regulator	0.3514 (0.000)	7.5071 (0.000)	-90.994 (0.23)	-53.87 (0.208)	50.337 (0.001)	-43.522 (0.94)
Control Variable	Age	-0.006 (0.000) 207**	-0.0372 (0.079) 207**	3.586 (0.000) 207**	6.525 (0.000) 207**	2.205 (0.000) 207**	1.624 (0.001) 207**

According to the results in table 4c postal services, railway, water and sanitations are consistently statistically significant regardless of the performance proxy used. By and large the three industries had lower performance when compared to airline industry except for value created per equity and debtor days.

Table 4c: Regression Results (Statistical Significance at $(p < 0.1)$).

Industry	<i>Return on Assets</i>	<i>Asset Turnover</i>	<i>Revenue per employee</i>	<i>Value Created Per equity</i>	<i>Debtor Days</i>	<i>Creditor Days</i>
Mining Services	0.07567 (0.573)	4.630 (0.015)	14.638 (0.836)	457.104 (0.000)	158.886 (0.000)	33.341 (0.501)
Postal Services	0.5382 (0.000)	14.309 (0.000)	-166.92 (0.045)	283.578 (0.000)	35.992 (0.034)	-106.311 (0.000)
Power	-0.364 (0.140)	-12.11 (0.000)	-79.311 (0.383)	114.047 (0.206)	3.438 (0.904)	-301.603 (0.000)
Railways	-0.3187 (0.010)	-5.852 (0.000)	-47.297 (0.375)	169.500 (0.001)	10.374 (0.523)	-116.95 (0.000)
Telecomms	-0.2853 (0.006)	-7.072 (0.000)	-41.571 (0.456)	286.575 (0.000)	88.902 (0.000)	23.30 (0.048)
Water & sani.	-0.4016 (0.107)	-11.15 (0.000)	-66.603 (0.470)	196.314 (0.035)	20.471 (0.488)	-279.79 (0.000)

5. Discussion of Results

We note from table 4a that the liquidity variable has a significant influence only when SOE performance is measured in terms of revenue per employee and creditor days, under which the relationship is positive as expected. This finding is in concurrence with a number of studies (Tang and Peng, (2003), Singh, (1986), Bromiley , (1991), Leiblein ,(1996), Hambrick and D'Aveni , (1988), Chudson, (1945) which have found that firm liquidity have a positive influence on firm' performance. According to corporate finance literature, optimal liquidity levels generally allow for competitive supplier terms, permit early payment discounts to be exploited, facilitate supplier preferential treatment and special pricing arrangements etc. The likelihood of interrupted production is kept low through continuous availability of the necessary inputs whilst short term financing costs incurred by the less liquid firms are often replaced by short term finance income earned, all these would be expected to result in improved firm performance. For liquidity to remain a variable of no statistical significance under the rest of the performance measures is surprising, but it perhaps suffers from *endogeneity* problem since accumulation and/or maintenance of sufficient levels of current assets and sustainable current liability level may to some degree be a result of a track record of performance, whilst on the other hand its good performance that would lead to healthy liquidity positions.

Our results show gearing levels to be significantly and negatively correlated to SOE performance when return on assets, revenue per employee and creditor days are used as measures of performance, whilst the relationship is of no statistical significance under the rest of the measurers. The inverse relationship between gearing levels and SOE performance is as per expectations; debt generally has the effect of eroding the available free cash flows (Jansen, (1986) thus contributing to even lower liquidity levels, which may explain the reported results of its negative effect on performance.

Consistent with findings by (Akhtar *et al* (2012), our results support the hypothesis that, the more the resources an SOE has, the better it will perform, and this has to be dependent on how uniquely and strategically those resources are combined in pursuit of performance objectives (Hamel & Prahalad, (1994). SOE managers do have the capability of leveraging on the resources at the disposal of their firms to bring about good performance and this is in support of the resource based theory.

We also establish a positive link between the size of SOEs and their performance. Larger firms often face higher levels of scrutiny and more pressure to deliver better results, partly due to their level of strategic importance (Lioukas *et al* (1993) and it has been established that government pressure alone can, and more often does steer SOE performance in the right direction (Kim and Chung, (2008), Aivazian *et al* 2005, Moushibahou, (2010). A further explanation to a positive and significant relationship between a firm performance and its size is offered by (Penrose, 1959, cited in Majumdar, (1997) who postulates that larger firms have diverse capabilities, abilities to exploit economies of scale and a better scope for formalized and standardized procedures. Whilst governments may be splitting SOEs into smaller, specialized or regionally focused entities, our results suggest that benefits associated with larger but well managed SOEs get lost in the process, it is therefore imperative that the focus be on finding the optimal size than just getting smaller.

Government's involvement in service and product pricing decisions has a negative influence on SOE performance and this is consistent under the following measures of performance: return on assets, asset turnover, debtor days and creditor days. If good performance is to be the goal of SOEs, good managers faced with appropriate choices are capable of making the right decisions which will bring about such good performance, as such our results do support the stewardship theory. However the results do not show competition as having any influence of statistical significance on SOE performance under a number of the performance measures we use, significance is only reflected when the measure is debtor days and creditor days but with opposing correlation. Under the debtor day's measure competition is reflected to have a positive influence on SOE performance whilst the reverse occurs under the creditor day's measure. The results do not seem to reflect anything conclusive and this has been the trend with other studies in the

subject, whilst some studies on SOEs have suggested competition to be having an effect of reducing performance margins (Perevalov *et al*, (1999, Sappington 2003), others (Carlin *et al*, (2006)) find opposing effects of competition on SOE performance depending on the performance measure used, although they conclude that competitive pressure has importance on productivity.

In concurrence with the agency theory, this study confirms the hypothesis that the existence of stronger boards in SOEs does lead to better performance thereby suggesting that as much as the agency problem exists in SOEs, where it is often found to be deeper and more complex (Menozzi, (2009), the use of strong boards can curb the problem as postulated by (Ongore and K'Obonyo, (2011). This finding is consistent with a number of studies that have concluded the same (Irwin and Yamamoto, (2004). Whilst some governments have attempted to appoint strong boards to SOEs, the downside has been that in some cases such boards are political appointees, or politicians themselves. The presence of heavy political influence on boards have been found to have a negative impact on SOE performance (Menozzi, (2009) and this is because political directives quite often overrules good governance and objective rationale (Berg *et al*, (2005). It is therefore of paramount importance for governments to consider limiting political presence, at least of a direct nature in the governing of state owned enterprises.

We also find that SOEs that have a wider stakeholder representation on their boards perform better than the ones with less, and this is consistently so when the measures of performance used are asset turnover, value created per equity and debtor days. This does suggest that the stakeholder theory holds, however, the position held by other studies (Donaldson and Preston, (1995) Heath and Norman, (2004), Wicaksono, (2009) that in an SOE set up, attempting to cater for all stakeholders will only hamper performance due to the divergent nature of their interests is also confirmed when the performance measure is revenue per employee. A possible explanation for this is that reconciling needs of divergent SOE stakeholders will always be a challenge if performance is to matter, the interest are just too diverse. Perhaps this further confirms the biggest criticism of this theory by (Donaldson and Preston, (1995) that it fails to realize that stakeholders, particularly so in the case of SOEs are often multiple and pursuing conflicting interests. Whilst nothing conclusive can be said in respect of the stakeholder theory under this study, a leaf can certainly be borrowed from (Heath and Norman, (2004) who postulate that some stakeholder interests may be subordinated for the interest of the overall objective. As noted above, this study have found that in concurrence with the agency theory defining a good board composition in terms of skill and expertise tends to lead to better performance, rather than focusing too much on drawing from all stakeholder groups.

Our results establish a negative link between dependency on government funding and firm performance under the creditor days, return on assets measures and debtor days. This result could be explaining the fact that where government's financial involvement is high, so will be political influence and interference, which has been found to lead to lower performance over time (Xu et al, (2001), Kathrn et al, (2001) Bozec et al, (2002). It has been established, as we present above, that SOEs have the capability to perform better with less political influence, and this for one can be through affording autonomy to those in charge, but as (Bortolotti & Pinotti, (2008) rightly argues, everything begins with the right political will to let go, therefore the public choice theory is confirmed by the study.

We find industry regulation to be positively correlated to SOE performance when asset productivity measures (return on asset and asset turn over) are used, this further confirms the public choice theory as independent market regulation generally has the effect of limiting political influence. This result is consistent with a number of previous studies (Arnold et al, 2009, Wallsten, (2002, Karamti and Kammoun, (2012). The positive correlation between industry regulation and firm performance has been attributed to the fact that such regulation tends to moderate the economic rents available in the market, Daveri *et al*, (2010). It is therefore recommendable for governments to seriously engage in giving industry and market regulatory functions to duly set up autonomous regulatory bodies, and care should be exercised in avoiding these entities becoming yet other SOEs quite inefficient even more than the ones they are meant to regulate.

The age of an SOE is found to be a positive influence on performance and this is consistent under the creditor days, value created per equity, revenue per employee and debtor days performance measures, where the correlation coefficients are relative low enough.

6. Conclusions

Well-resourced SOEs will perform better than those with fewer resources, and this supports the Resource Based Theory. However, for resources to lead to better performance they need to be of value and managers need to be good stewards in uniquely applying such resources for the attainment of objectives, including value addition. Governments therefore need to keep SOE's optimally resourced, but bearing in mind that resources on their own may turn out to be wastage if not optimally utilised.

Although the government's involvement in SOE service and product pricing decisions is often seen as to ensure affordability by consumers, such an involvement suppresses SOE performance over time. Governments should therefore, to the best extent possible, equip SOE managers with necessary skills to

make decisions under appropriate oversight mechanisms as our results suggest that the stewardship theory hold to some extent. This tie with our finding that the agency theory holds in SOEs, as we find that performance was much better in SOEs where boards are stronger.

Whilst the stakeholder theory has been hailed to assist in driving better firm performance by proponents, the same cannot be said for SOEs, where attempts to balance the divergent needs of a variety of stakeholder is found to impact negatively on firm performance. Balancing the needs of all stakeholders can however still be achieved provided it's carried out in a well-crafted hierarchical manner, where the overall objectives are not subordinated or relegated to competing needs of various groups.

Government influence and political control will quite often manifest itself self when SOEs (often monopolies) operate in an industry without an independent regulator, i.e. where the government itself is the regulator. The same strong position of governments exists when an SOE depends heavily on government for financing needs. We establish and conclude that these characteristics lead lower performance, thereby confirming public choice view.

In summary, the results our study suggest that SOE performance can be explained and predicted in terms of the resource based theory, agency theory, stewardship theory and the public choice theory. Our results do not bring out anything conclusive about the stakeholder theory at this stage.

These results are preliminary and subject to further enhancements through application of a wider range of performance measures and proxy variables as well as refined methodology. However they bring to light a few contradictions though, for instance if managers are good stewards as confirmed by the study, why do SOEs with less stronger boards perform below those with stronger boards? If stronger boards can drive SOEs to an above average performance, does this mean they can wither political influence under the public choice view which the study confirms to hold?

7. References

- Ademayo, D.O, and Salami, A. (2008) 'A Review of Privatization and Public Enterprises Reform in Nigeria' , Contemporary Management Research, Vol 04(04), Pp. 401 – 418
- Aivazian, V.A, Geb, Y and Qiuc, J (2005) 'Can corporatization improve the performance of
- Al-Quadah, A and Mustafa. A (2011) 'The Operating Efficiency and Market Value of Jordanian Privatized Firms: Fixed and Random Effects Analysis', Interdisciplinary Journal of Research in Business, Vol 7, Pp 99 – 116.
- Arnold, J., G. Nicoletti and S. Scarpetta (2008),. "Regulation, Allocative Efficiency and Productivity in OECD. Countries: Industry and Firm-Level Evidence", OECD ... ECONOMICS DEPARTMENT WORKING PAPER No. 616
- Arthurs ,J.D and Busenitz, L.W (2003) 'The Boundaries and Limitations of Agency Theory and Stewardship Theory in the Venture Capitalist/Entrepreneur Relationship' Entrepreneurship Theory and Practice, Volume 28, Issue 2, Pp 145–162
- Asian Development Bank, (2011) 'Asian Development Bank, Finding Balance, enchmarking the Performance of State-Owned Enterprises in Fiji, Marshall Islands, Samoa, Solomon Islands, and Tonga, Comparative Review of the Legal, Governance and Monitoring Frameworks, Volume II
- Boko, F and YuanJan Q, (2011) 'Failure of State-Owned Enterprises In Benin' School of Management, Wuhan University of technology
- Boko. F and YuanJian. Q (2011) 'Failure of State-Owned Enterprises In Benin' School of Management Wuhan University of Technology
- Bortolotti, B and Pinotti, P (2008) 'Delayed Privitasation' Public Choice, Vol. 136, No. 3/4 (Sep., 2008), pp. 331-351
- Bozec, R, Breton, G and Cote, L(2002) 'The performance of State Owned Enterprises re visited' Financial Accountability and Management , Vol 18 (4), 0267 - 4424
- Buchs, T.D (2003) 'Privitization in Sub Sahara Africa: Some lessons from experience to date ' The International Finance corporation', JEL Classification D78, L33, L41
- Capobianco, A. and H. Christiansen (2011), "Competitive Neutrality and State-Owned Enterprises: Challenges and Policy Options", OECD Corporate Governance Working, Papers, No. 1, OECD Publishing.
- Casero, P.A, & Udomsaph, C (2009) 'What Drives Firm Productivity Growth?' , World Bank, Policy Research Working Paper 4841.
- Dabla-Norris,E, Kersting, E and Verdier G (2010) 'Firm Productivity, Innovation, and Financial Development', International Monetary Fund, Working Paper 10/49

- Donaldson, T and Preston, L (1995) 'The Stakeholder Theory of the Corporation: Concepts, Evidence, and Implications' *The Academy of Management Review*, Vol. 20, No. 1, Pp. 65-91
- Elwel, K and Labonte, M (2007) 'Is China a Threat to the U.S. Economy?' Congressional Research Service, Government and Finance Division, Prepared for members and Committees of Congress
- Enterprises in Fiji, Marshall Islands, Samoa, Solomon Islands, and Tonga' *Comparative Review of the Legal, Governance and Monitoring Frameworks: Volume II*
- Etukudo, A (1997) 'Issues in Privatisation and restructuring in Sub Sahara' *Journal of Business Ethics*, Vol. 15 (3), Pp. 364-369
- FORFAS (2010) 'The Role of State Owned Enterprises: Providing Infrastructure and Supporting Economic Recovery' FORFÁS
- Foster, V and Briceño-Garmendia, C (2008) 'Africa's Infrastructure, A Time for Transformation' A copublication of the Agence Française de Développement and the World Bank
- Freeman, R.E (1994) 'The Politics of Stakeholder theory: Some future directions' *Business Ethics Quarterly*, Vol 4(4), Pp 409 - 421
- Fritz, V and Menocal, R (2006) '(Re)building Developmental States: From Theory to Practice Working' Overseas Development Institute, Working Paper 274,
- Fudanga, C. M & Mwaba, A 'Privitization of State Owned Enterprises in Zambia', African Development Bank, Economic Research Papers No. 35
- Gioia, D.A and Corley, K.G (2011) 'Building theory about theory building: What constitutes a theoretical contribution', *Academy of Management review*, Vol. 36 (1), Pp 12-32
- Goedhuys M, Janz, N, Mohen, P (2006) 'What drives productivity in Tanzanian manufacturing firms: technology or institutions?' United Nations University - Maastricht Economic and social Research and training centre on Innovation and Technology, Working Paper #2006-37
- Heath, J and Norman, W (2004) 'Stakeholder Theory, Corporate, Governance and Public Management: What can the History of State-Run Enterprises Teach us in the Post-Enron era?' *Journal of Business Ethics*, Vol 53, Pp 247 - 265
- Hsiao, C, 'Panel data analysis—advantages and challenges' *Sociedad de Estadística e Investigación Operativa*, Invited paper, DOI 10.1007/s11749-007-0046-x
- Hsiao, C (2006) 'Panel Data Analysis - Advantages and Challenges' The Wang Yanan Institute for Studies in Economics, Xiamen University, Wise Working Paper Series- WISEWP0602,
- Kikeri, S and Kolo, A (2006) 'State Enterprises: What remains?' World Bank, Public Policy for the Private Sector, Note Number 304
- Kim, J and Chung, H (2008) 'Empirical Study on the Performance of State-owned-enterprises: The Case of Korea' Graduate School of Public Administration, Seoul National University

- Koma, B and Pamacheche, F (2007) 'Privatization in Sub-Saharan Africa - an essential route to poverty alleviation' *African Integration Review* ,Volume 1, No. 2, Pp 1-21
- Lee, J. (2009) 'State Owned Enterprises in China: Reviewing the Evidence' Organization for Economic Cooperation and Development, OECD Publishing
- Li, S and Xia J (2007) ' , The Roles and Performance of State Firms and
- Lioukas,s, Bourantas, D and Papadakis, v (1993)' Managerial autonomy of State-Owned Enterprises: Determining factors' *Organization Science*, Vol. 4, No. 4, Pp 645 - 666
- Mattlin, M, (2009) 'Chinese Strategic state-owned Enterprises and ownership control' , *Asia Paper*, Brussels Institute of Contemporary China Studies, JE G32, G38, P26. BICCS Asia Paper Vol. 4 (6)
- Moushibahou, A.A (2010) 'An empirical study of the phenomenon of retroactive participation of sub-national investment companies in privatised firms in Nigeria' Department of Management, St Clements University
- Mkandawire, T (1988). The road to crisis, adjustment and de-industrialization: the African case. *Africa Development*, vol. 13, No. 1.
- Mwaura, K (2007) 'The Failure of Corporate Governance in State Owned Enterprises and the Need for Restructured Governance in Fully and Partially Privatized Enterprises : The Case of Kenya' , *Fordham International Law Journal* , Vol 31 (01), Pp 34 - 75
- Nellis, J.R (1988) 'Public Enterprises in Sub-Sahara Africa' World Bank Discussion Papers, The World Bank
- Nellis, J.R (2005) 'The Evolution of Enterprise Reform in Africa: From State-owned Enterprises to Private Participation in Infrastructure — and Back?' Center for Global Development, Fondazione Eni Enrico Mattei, NOTA DI LAVORO 117.2005
- Non-State Firms in China's Economic Transition' *World Development* , Vol. 36, No. 1, Pp. 39–54
- Ntiri, A.N (2010) 'Can Performance of State Owned Enterprises improve when Prvitized?: The case of Ghanaian firms, Blekige Institute of Technology, School of Management
- OECD (2005) 'OECD Guidelines on Corporate Governance of State-Owned Enterprises' Organisation for Economic Co-operation and Development
- Okhuysen, G & Bonardi J.P 'The challenges of Building theory by combining lenses' *Academy of Management Review*. Vol 36 (1), Pp 6 - 11
- Ongore, V.O and K'Obonyo, P.O (2011) 'Effects of Selected Corporate Governance Characteristics on Firm Performance: Empirical Evidence from Kenya' *International Journal of Economics and Financial Issues*, Vol. 1, No. 3, 2011, pp.99-122
- Peng, M.W (2001) 'The resource-based view and international business' *Journal of management*, Vol.27, Pp 803 - 829

Rajagopalan, N., & Zhang, Y. (2008). 'Corporate governance, reforms in China and India' Challenges and opportunities' *Business Horizons*, Vol 51(1), Pp 55—64.

Ralston D.A, Terpstra-Tong, J, Terpstra, R.H, Wang, X and Egri, C (2006) 'Today's State-Owned Enterprises of China: Are They Dying Dinosaurs or Dynamic Dynamos?' University of Macao,

Rama, M and Newman,C (2002) 'Downsizing and Productivity Gains in the Public and Private Sectors of Colombia' Development Research Group, World Bank. Working Paper WPS 2770

Ross, S.A (1973) 'The Economic Theory of Agency: The Principal's Problem', *Decision making under uncertainty*, Vol. 63 (02), Pp 134 – 139

Shaw,J (2008) 'Public Choice Theory' *The concise encyclopedia of Economics*, <http://www.econlib.org/library/Enc/PublicChoiceTheory.html>

Shirley, M (1998) 'Why Performance Contracts for State Owned Enterprises Haven't Worked' World Bank, Policy Note No. 150

SkyTrax, 2011, <http://www.worldairlineawards.com/>, accessed in April 2012

state-owned enterprises even without privatization?', *Journal of Corporate Finance*, Vol 11, Pp 791 – 808

Sundaram, J.K, Schwank, O. and Arnim, R (2011) 'Globalization and Developments in Sub Sahara Africa' , United Nations Economic and Social Affairs, Working Paper No. 102

Tian, J. J., and Lau, C (2001). 'Board composition, leadership structure and performance in Chinese shareholding companies'. *Asia Pacific Journal of Management*, Vol 18, Pp 245–263.

Toninelli, P.A (2000) (ed.), *The Rise and Fall of State-Owned Enterprise in the Western World*, Cambridge, Cambridge University Press, pp. 49-72.

Torres-Reyna O (2007) *Panel Data Analysis: Fixed & Random Effects: Version 3.0*. Princeton University.

Trade Economics (2012) <http://www.tradingeconomics.com/sub-saharan-africa/population-total-wb-data.html>

Uhlenbruck, K and Meyer, K.E (2000) 'Organisational transformation in transition economies: resource-based and organizational learning perspectives' Center for East European Studies, Copenhagen Business School, Working Paper No. 35

UN (2008) 'Public Enterprises: Unresolved Challenges, and New Opportunities' United Nations, Department of Economic and Social Affairs, Division for Public Administration and Development Management, Working Papers ST/ESA/PAD/SER

Vagliasindi, M (2008) 'Governance Arrangements for State Owned Enterprises' The World Bank, Policy Research Working Paper 4542

Wicaksono, A (2009) 'Corporate governance of state-owned enterprises: Investment holding structure of Government-linked companies In Singapore and Malaysia and applicability for Indonesian State-Owned Enterprises' Graduate School of Business Administration, Economics, Law and Social Sciences HSG Difo-Druck GmbH, the University of St. Gallen

World Bank (2011) <http://siteresources.worldbank.org/EXTLICUS/Resources/511777-1269623894864/FCSHarmonizedListFY13.pdf>, Accessed in 29 April 2012

World Bank (2012) World Development Indicators database, World Bank, September 2012 <http://databank.worldbank.org/databank/download/GDP.pdf>

World Bank (2012) <http://data.worldbank.org/region/latin-america-and-caribbean>

Xia, L. J., Chen, X. Y (2007) 'Marketization, SOE reform strategy and endogenously determined corporate governance structure' Economic Research Journal Vol 7, Pp82-95

Xu, L.C, Zhu, T and Lin, Y (2001) 'Politician Control, Agency Problems, and Firm Performance: Evidence from a National Survey of Ownership Restructuring in China' Development Research Group, World Bank

Yang, Q, Yurtoglu, B.B (2009) 'Does the Strategic Role and the Control Role of the Board of Directors Exist in Chinese Listed Companies?' Institute for Financial Studies, Fudan University