



# Ownership Structure and Financial Performance of Companies in Uganda

**Dr Arthur Sunday**

College of Economics and Management Kampala International University

**Dr Abanis Turyahebwa**

Kampala International University

**Dr Mabonga Erick**

College of Economics and Management Kampala International University

**Dr Eliab Byamukama**

College of Economics and Management Kampala International University

**Tukei Martin**

College of Economics and Management Kampala International University

## ABSTRACT

*This study investigated the effects of change in ownership structure on financial performance of privatized companies in Uganda for the period 2010-2016. The study was informed by the property rights, the agency and the resource based theories. Data was extracted from prospectuses and financial reports of privatized companies, obtained from the Capital Markets Authority and the Uganda Stock Exchange. A unit root test was used to examine stationarity of data while a Hausman test determined the appropriate regression model. This study used a Fixed Effects (FE) regression model with a robust standard error option to control for heteroskedasticity and contemporaneous correlation which may lead to spurious results. The study found that ownership structure has a significant relationship with financial performance. Among individual variables, government ownership has a positive influence on ROA and the Tobin's Q; but a negative effect on cost efficiency. Institutional shareholders have a positive influence on ROA and technical efficiency. Large individual investors have a positive influence on cost efficiency while dispersed shareholders have a positive influence on ROA but a negative effect on cost efficiency. In view of these findings, this study recommends that the Privatization Sector of Uganda should restructure ownership structure of privatized companies to reduce government and dispersed ownership further to pass more control to private investors. However, the government should retain some ownership in privatized firms to enhance shareholders confidence, protection of investments and managerial monitoring. A strategic institutional investor in each company should be identified and be allocated adequate ownership to enable privatized companies to attract managerial and technical expertise crucial to improve governance and financial performance.*

**Key Words:** Privatization; Ownership structure; Financial Performance



## INTRODUCTION

Privatization involving the sale of government ownership to private investors is often seen as a remedy to transform State Owned Enterprises (SOEs) to become efficient and profitable. The government as an owner of commercial enterprises is deemed inefficient due to wide separation between ownership and control which makes it difficult to monitor managers. Privatization is supported by the property rights theory which asserts that private ownership is more efficient due focus on profit objectives, rights to income, and decision making which creates incentives to monitor managers (Shleifer & Vishny, 1997). The agency theory contends that private shareholders influence performance by monitoring the managers to protect their investments. The resource based theory recognizes that private shareholders bring in resources and expertise required by a company to improve governance and financial performance of corporate entities.

The success of privatization of State owned enterprises therefore depends on changing in the ownership structure to bring in the benefits associated with private ownership. However, the ownership structure of privatized firms often comprises of different types of shareholders with different sizes of ownership, diverse interests, incentives and abilities to influence performance. The empirical studies on the relationship between ownership structure variables and firm performance yield conflicting results. Some studies find that state ownership negatively influences firm performance (Ongore *et al.*, 2011; Pervan *et al.*, 2012; Mishari *et al.*, 2012). However, others found that large state ownership influences performance positively (Tian & Estrin, 2008; Trien & Chizema, 2011; Mei, 2013). Some studies conclude that institutional

ownership influences financial performance positively (Alireza *et al.*, 2011; Mishari *et al.*, 2012; Uwuigbe & Olusanmi, 2012). However, other studies report a negative relationship (Wei *et al.*, 2005; Alipour & Amjadi, 2011). In addition, Omran *et al.* (2008) found that foreign investors had no significant influence on performance while Wei *et al.* (2005) found a positive influence. Ongore *et al.* (2011) found that dispersed shareholders had a positive impact on performance while Mei (2013) found a negative relationship. Lack of consensus on empirical evidence is not surprising as performance depends on the effectiveness of ownership adopted and may differ not just by firms but national institutional specificities.

The interest of policy makers which motivates this study is to know whether the emerging ownership structure following privatization has secured the benefits associated with private ownership. The study is therefore important to the government and oversight authorities for policy implications and also to the shareholders for insights it offers over the management of their investments. This study improves on previous research by examining the influence of emerging ownership structure on performance of privatized firms using a combination of four financial performance indicators which include: ROA, the Tobin's Q, cost and technical efficiency. The cost and the technical efficiency values were generated using the Stochastic Frontier Analysis (SFA) approach which uses input and output approach. The study also uses panel data and employs modern econometric approaches that address potential biases which could be caused by non stationary, heteroskedasticity and contemporaneous correlations in data values.



## LITERATURE REVIEW

Theories that support privatization of SOEs largely focus on the advantages of private over public ownership. The property rights theory developed by Coase (1960) asserts that property rights determine the choices open to decision makers and consequently the financial performance. According to Alchian and Demsetz (1973), the property rights could be owned privately, by the state, or held in common by the society, and that different holders use the rights distinctively. The theory therefore identifies allocation of property rights as instrumental in achieving firm efficiency as they create incentives to monitor managers leading to higher efficiency and profitability. Under this framework, the state ownership is considered detrimental to financial performance due to the wide separation between ownership and control which makes it ineffective in monitoring managers (Shleifer & Vishny (1997). The government as an owner is also likely to influence financial performance negatively due to focus on both welfare and economic objectives (Vickers & Yarrow, 1991). According to Boycko *et al.* (1996), public enterprises are inefficient due to political interference as governments use them to reward supporters. Inefficiency in SOEs has also been attributed to reliance on government funding and hence the discipline enforced on private firms by the money and capital markets does not affect them (Sun & Tong, 2002). Privatization is therefore expected to improve corporate financial performance by changing the ownership structure and passing management of companies formally owned by the state to private investors and corporate boards.

The agency theory recognizes that in a modern corporation, there is a wide separation between ownership and management, resulting in the

conflict of interests between the owners and the agents. The theory developed by Jensen and Meckling (1976) asserts that the wide separation gives the managers a leeway to pursue private interests which may lead to inefficiency, expropriation of corporate cash flows, assets and loss of firm value. The theory also identifies large block shareholders and individual as key variables that could influence firm performance. The prediction of the theory is that at large block shareholders and individuals may influence performance positively as they have incentives to monitor managers. However, Fama and Jensen (1983) argue that large ownership may entrench owners leading to expropriation of corporate wealth which could decrease firm value and returns on investments. The agency theory also predicts an insignificant relationship between dispersed shareholders due to the small size of ownership. These predictions are within the scope of privatization studies as they suggest the expected relationship of ownership structure variables and financial performance.

The resource based theory focuses on the importance of resources as a critical factor for a firm to have a competitive advantage. The theory is derived from Penrose's (1959) definition of a firm as a collection of physical and human resources crucial for its growth and performance. Barney (1991) defines the resources sought by firms to create a competitive advantage to include technical expertise, managerial skills and information essential in detecting and responding to market opportunities or threats. Privatization is expected to change ownership structure of SOEs to help firms co-opt the skills, technologies and financial resources needed to improve financial performance. Accordingly, large foreign institutional shareholders are expected to influence performance positively as they are considered to have good



monitoring capabilities; bring professional expertise (Thomsen & Pedersen, 2000). Local institutional shareholders are also considered a crucial resource in improving firm performance due to their role in monitoring managers and focus on profits. They also help firms to expand networks by linking them with suppliers, buyers, public policy makers in addition to bringing resources such as managerial skills, technical expertise and information that a firm needs to increase performance.

Studies on the relationship between financial performance and ownership structure were pioneered by Berle and Means (1932) who observed that ownership in large US was widely dispersed to small shareholders often holding less than one percent of shares. They study observed that under such circumstances, no shareholder could influence the managers and therefore such firms could not be considered to be controlled by their owners. The agency theory identifies ownership by large block shareholders as a mechanism to reduce the principal-agency problems in corporate entities. Consequently numerous studies have been conducted to examine the effects of ownership structure on financial performance. One line of study examines at the influence of different ownership structures on firm performance largely using ROA and the Tobin's Q as performance indicators. Following this approach, Wei, *et al.* (2005) examined the relation between ownership structure and firm value of partially privatized firms in China's from 1991-2001. The study found that the state and institutional ownership had a negative relationship with the Tobin's Q, while foreign ownership has a positive relationship with the Tobin's Q. Ang and Ding (2006) compared market value of SOEs and private firms in Singapore and found that SOEs had higher valuation compared to

private firms. Tian and Estrin (2008) examined the relationship between retained state shareholding and corporate value in Chinese listed firms and found that government ownership and the Tobin's Q is U-shaped implying that the state can increase firm value when its shareholding is large.

Using a similar approach, Trien and Chizema (2011) found that at low levels of state ownership, the Tobin's Q and ROA was negative, while it was positive when state ownership is high in Chinese listed firms. In Tehran, Alipour and Amjadi (2011) found a negative and significant relationship between institutional and individual shareholders on performance of listed firms. In some more recent studies Mrad and Hallara (2012) examined the relationship between the government ownership and performance of privatized firms in France. The study found that high state ownership had a positive relationship with ROA and the Tobin's Q, while the relationship on both indicators was negative when state ownership was low. Mishari *et al.* (2012) also explored the effects of ownership structure on the ROA and Tobin's Q of firms listed in Kuwait and found a positive relationship between institutional investors and firm performance while the government had a negative relationship. In Nigerian, Uwuigbe and Olusanmi (2012) found that institutional investors had a positive relationship with ROA while foreign ownership had a positive relationship on listed firms in the financial sector. In Croatian, Pervan, *et al.* (2012) examined the relationship between ownership structure and ROA of listed firms and found that firms with dispersed ownership had a higher ROA than those with concentrated ownership. The study also found that foreign controlled firms performed better than those with a high domestic ownership while firms with majority



state ownership had a lower performance than privately owned firms. In contrast, Mei (2013) found that a higher state ownership influence the ROA, ROE and the Tobin's Q, better than dispersed ownership.

A different line of study investigates the influence of ownership structure on performance using cost or technical efficiency indicators. Liu (2001) examined the effect of state ownership on technical efficiency in some international airlines and found that the state ownership lowers technical efficiency. Yildirim and Philippatos (2003) examined the cost efficiency of 12 European banks and found that foreign banks were more cost efficient than domestic, private and state-owned banks. Fries and Anita (2004) also examined the cost efficiency of banks in Europe and found that private banks were more efficient than state-owned banks. The study also found that privatized banks with majority foreign ownership were more efficient than banks with higher domestic ownership. Zelenyuk and Zheka (2006) examined the effects of ownership structure on efficiency of firms in Ukraine and found that the state-ownership and surprisingly, foreign ownership had a positive and significant relationship to inefficiency.

In Italy, Destefanis and Sena (2007) examined the influence of ownership on the technical efficiency of manufacturing firms and found out that large shareholders had a positive impact on efficiency. Yiwei *et al.* (2011) examined the cost efficiency of banks in Europe and found that the average bank cost efficiency was 68.59%. Foreign banks had a lower cost efficiency compared to government and domestic private banks. The study also found that the efficiency gap between foreign, domestic private banks and state owned banks narrowed over time. In Tunisia, Ochi and

Yosra (2012) examined the effects of ownership on cost efficiency of banks and found that banks with majority foreign ownership were more efficient than those with a high domestic ownership. In Tunisian, Ayadi (2014) found that the technical efficiency of banks was 57.1% which means they could improve performance by 42.9%. It is evident that most of the studies using efficiency indicators largely focus on bank efficiency.

In Kenya, Ongore *et al.* (2011) examined the relationship between ownership structure and financial performance of companies listed at the NSE. The study found that a significant negative relationship between state ownership and financial performance while foreign, insider, diverse and institutional ownership have significant positive relationships with ROA, ROE and dividend yield. Mang'unyi (2011) found that foreign-owned banks had a better performance than domestic-owned banks. Kiruri (2013) examined the effects of ownership structure on bank profitability in Kenya and found that state ownership has negative effects on profitability while foreign ownership and domestic ownership had positive influence. It is evident that the existing literature present mixed results in that, some report positive, negative while others report no significant relationships between ownership structure and financial performance. It is also apparent that the empirical studies in Uganda do not focus on privatized firms. The authors also use accounting ratios which not capture the market value and efficiency which are key objectives of privatization. This demonstrates the need to investigate the influence of ownership structure and financial performance in Uganda using market value and efficiency indicators.



**METHODOLOGY**

This section present the methodology used to examine the influence of ownership structure on performance of privatized companies in Uganda for the period 2010 to 2016. Purposive sampling was used to select the privatized firms from a population of all the listed companies in Uganda. This method allows the researcher to pick the sample according to the nature of the research problem and the phenomenon under study (Saunders *et al.*, 2009). Firms selected were those privatized by sale of shares, listed and in which the Government has retained some ownership. The study was also confined to firms where majority of the shares were owned by the state before privatization .

The data was extracted from annual reports of privatized companies for the period 2010-2016. The audited annual reports were obtained from CMA and ownership variables extracted from the reports were the percentage of shares owned by state, local institutions foreign institutions, large individuals and dispersed shareholders. This was possible as the public offers, listing and disclosures regulations require listed companies to disclose the identity of major shareholders. Financial performance variables used are ROA, Tobin’s Q, cost efficiency and technical efficiency. The values of ROA were computed by dividing profit after tax by total assets for each company for each year during the period 2010-16. The variables were compared to those in the annual reports of privatized. Tobin’s Q ratio was computed by dividing market capitalization (total shares of a company at end of financial year multiplied by the share price) by the total assets. The cost efficiency and technical efficiency values were computed using the SFA version 4.1c. The input values used were; cost of sales/materials, total expenses (financial &

operating) and total assets while output was measured by total sales.

The data analysis techniques applied in theses study include a combination of summary statistics, correlation, regression diagnostic tests and regression analysis. As panel data is used in this study, a major concern is non-stationary of data series which may lead to spurious relationships. This study used the Levin, Lin, Chu and (LLC) test whose null hypothesis is that variables are non-stationary implying that it has a unit root. Panel data models also recognize that firms used in the sample may have individual characteristics which may impact on performance variables. A Hausman test was used to determine whether to use the Fixed Effects (FE) or Random Effects (RE) regression model to control for firm individual characteristics. The influence of ownership structure on performances was examined through the following four regression models:

$$PERF_{it} = \alpha_0 + \alpha_1 GOVT_{it} + \alpha_2 INST_{it} + \alpha_3 FORI_{it} + \alpha_4 LISH_{it} + \alpha_5 DISP_{it} + \alpha_6 \ln FSIZE_{it} + \alpha_7 LEV_{it} + \alpha_8 INVE_{it} + \epsilon_{it}$$

(1)

Where:  $i = 1, \dots, 4$

PERF<sub>1</sub>= ROA; PERF<sub>2</sub>= Tobin’s Q; PERF<sub>3</sub>= CEFF; PERF<sub>4</sub>= TEFF

The variables and coefficients used in the regression models are measured as follows:

ROA = Profit after tax divided by total assets

Tobin’s Q = market capitalization (shares at year end multiplied by share price / by total assets

CEFF = Cost efficiency scores computed using the SFA technique



- TEFF = Technical efficiency scores computed using the SFA technique
- $\alpha$  = Intercept or constant
- $\alpha_1$  = Coefficients for each of the independent variables to be estimated:  $i = 1-9$
- $i$  = Individual company
- $t$  = Time (year)
- GOVT = Percentage of shareholding held by government in firm  $i$  in period  $t$ .
- INST = Percentage shares owned by local institutions in firm  $i$ , in period  $t$ .
- FORI = Percentage shares owned by foreign companies in firm  $i$ , in period  $t$ .
- LISH = Percentage of shares held by large individual shareholders in firm  $i$  in period  $t$ .
- DISP = Percentage of shares held by dispersed shareholders in firm  $i$ , in period  $t$ .
- FSIZE = Total assets of a company (the log of total assets)
- LEV = Total liabilities / total assets
- INVE = Capital expenditure/ total assets
- $\varepsilon_{it}$  = Error term

imply that local institutions in Uganda have a lesser capacity to influence governance in privatized companies. The average foreign institutional ownership in privatized firms is 9%. This is lower than 11.77% observed by Omran (2008) in privatized firms in Egypt. The results suggest that foreign ownership in privatized companies in Uganda is relatively on average and may not have any significant influence on financial performance.

Large individual investors' own 1% shares in privatized firms which considered to be too small to have any effects on financial performance. Maher and Anderson (1999) indicate that individual should have at least 5% to have any impact on performance. The average shares held by dispersed shareholders is 39% which means that privatized firms in Uganda are still owned by a large number of small shareholders. This is similar to findings in other studies which found that share ownership of large firms was dispersed (La Porta *et al.*, 1999; Faccio & Lang, 2002). According to Berle and Means (1932) such corporations have no control over the management of their investments. The companies are therefore likely to experience the agency problems associated with a large separation between ownership and control.

## RESULTS AND DISCUSSION

### Descriptive Statistics

The results indicate that the government remains share holder in privatized firms. This is consistent to studies which find that the state remains the ultimate shareholder in privatized companies (Bortolotti & Faccio, 2008; Omran 2008; Tian & Estrin, 2008; Wei *et al.*, 2005). This is an indicator that the government has the capacity to influence decision making in privatized firms. Local institutions own a mean of 10 % shares which is low compared to 29.8% observed by Wei *et al.*, 2005 in privatized companies in China. The findings

The mean of ROA in privatized firms is 5.2% which is lower than an average 6.18% observed by Boubakri and Cosset (1999) in privatized companies drawn from five African countries. It is also lower than the 7.17% documented by Sun and Tong (2002) in privatized firms in Malaysia. The Tobin's of privatized firms in Kenya is 48% which is lower than 82.9% observed by Mrad and Hallara (2012) in privatized companies in France. The mean cost efficiency in privatized firms is 10% which is consistent to other studies which found inefficiency in corporate



entities (Kinara, 2014; Sifunjo *et al.*, 2014). The technical efficiency in privatized firms is 43% which means that they can improve performance by 57% using the same resources. This level of technical efficiency is low compared to 62.9 % reported by Kamaruddin and Abokarsh (2012) in Libyan privatized firms.

This study includes into the regression model some variables also considered to have the potential to influence financial performance. These variables are the firm size, leverage and the investment levels of privatized companies. Firm size of privatized companies expressed as the log of its assets is 17.87 which is higher

than an average of 10.23 documented by La porta *et al.* (1999) in Mexico. Privatized companies in Uganda are expected to be large in size as the government invested heavily in their establishment as they were meant to serve national strategic interests. The leverage in privatized firms in Uganda is 62% which is lower compared to 66.26% observed by Boubakri and Cosset (1999). However Omran (2004) reported a leverage of 19.5 % in Egyptian privatized firms. The percentage of investment in privatized firms in Uganda is approximately at 6% which is lower than the 7.9% reported by Boubakri and Cosset (1999) and 13% documented by Hennesy and Whited (2005) in U.S corporations.

**The Correlation Analysis**

Table 1 below presents the results of the correlation between ownership, financial performance and the control variables of privatized companies. According to Mugenda and Mugenda (2003) a relationship is strong when  $r=0.5$  and above, moderate if  $r$  is between 0.3 and 0.49 and weak if  $r$  is below 0.29.

	ROA	T Q	CEFF	TEFF	GOV	INST	FORI	LISH	DISP	FSIZE	LEV	INVE
ROA	1.0000											
TQ	0.6291	1.0000										
CEFF	-0.2268	-0.1232	1.0000									
TEFF	-0.2268	-0.1232	1.0000									
GOV	0.1549	-0.1043	-0.0314	-0.2446	1.0000							
INST	-0.3298	-0.2348	0.0959	-0.3004	-0.6483	1.0000						
FORI	0.4193	0.5353	-0.0138	0.8250	-0.1611	-0.1986	1.0000					
LISH	-0.2930	-0.1303	-0.1239	-0.0316	-0.5550	0.3412	-0.1957	1.0000				
DISP	-0.2824	-0.1243	-0.0117	-0.1398	-0.6410	0.2336	-0.4589	0.6954	1.0000			
FSIZE	-0.2007	-0.0746	0.2270	0.0180	0.1187	-0.2525	0.2364	-0.2606	-0.1439	1.0000		
LEV	-0.6877	-0.5279	0.0846	-0.3721	-0.2373	0.4460	-0.2617	0.3167	0.1699	0.3249	1.0000	
INVE	0.5403	0.5731	0.0399	0.6347	0.0019	-0.3322	0.6954	-0.2057	-0.3168	0.1676	-0.5289	1.0000

**Key:** ROA means Return on Assets; TQ; is the Tobin's Q; CEFF is Cost Efficiency ; TEFF means the Technical Efficiency; GOV means Government Ownership; INST is an indicator of Institutional Ownership; FORI means Foreign Ownership; LISH implies Large Individual Shareholders; DISP is an indicator of Dispersed Ownership

The results show that ROA has a positive correlation with government and foreign ownership but a negative correlation with institutional, large individual and dispersed shareholders. The ROA also has a negative relationship with firm size and leverage but positive with investment. A strong negative correlation of -0.69 is found between ROA and leverage. Except for foreign institutional investors, Tobin's Q has a negative correlation with all other ownership variables. The Tobin's Q has a positive correlation with investment while it is negative with firm size and leverage. A strong positive correlation of 0.57 exists between the Tobin's Q and capital investment. The Tobin's Q and ROA





exhibit a high correlation of 0.63. The variables may be highly correlated as the Tobin’s Q reflects the investor’s opinion of the firm, based on performance measured by ROA. The relationship poses no problem in the regression models as they are examined separately.

Cost efficiency has a negative correlation with government, foreign, large individual and dispersed shareholders and a positive relation with institutional investors. Technical efficiency has a negative correlation with government and local institutional ownership while it has a positive correlation with foreign, large individuals and dispersed shareholders. It also has a positive correlation with investment and firm size while it has a negative correlation with leverage. A strong positive correlation of 0.83 exists between technical efficiency and leverage. It is apparent government ownership has a high correlation with institutional investors with a coefficient of -0.65 and large individual shareholder with a coefficient of -0.56 and dispersed shareholders with a coefficient of -0.64. Foreign ownership has a high correlation with investment with a coefficient of 0.70. Dispersed shareholders are also highly correlated with large individual investors with a correlation coefficient of 0.70. High correlation is an indicator of possible multi collinearity problem among the variables. The correlation however does not prove causation as the causal relationships are analyzed using the regression analysis.

**Panel Unit Root Test and the Hausman Test**

This study used the LLC test whose null hypothesis is that panels contain unit roots normally testing whether the p value is greater or less than 0.05. Rejecting the null hypothesis of a unit root means the variable is stationary. Table 3 below presents the unit root test results.

**Table 2: The Unit Root Tests for the Ownership Variables and Financial Performance**

Variable	1(0) Adjusted t	P- value	1(1) Adjusted t	P-value
ROA	-2.9722	0.0015		
Tobin’s Q	-6.3857	0.0000		
Cost Efficiency	781.6944	1.0000	98.3920	1.0000
Technical Efficiency	-17.4472	0.0000		
Government	175.9886	1.0000	507.2046	1.0000
Institutional	-3.6325	0.0001		
Foreign	-1.9067	0.0283		
Large individual	-0.0949	0.4622	-2.9244	0.0017
Dispersed	-51.2902	0.0000		
Firm Size	1.0494	0.8530	-5.3204	0.0000
Leverage	-2.4433	0.0073		
Investment	-3.8166	0.0001		

The results for ROA, Tobin’s Q, technical efficiency, institutional, foreign, dispersed, leverage and investment shows that the p-values calculated are less than the critical value of 0.05 which means that the variables are stationary in their original form. The p-values for cost efficiency, government, firm size, and large individual were more than the critical value of 0.05 implying that the variables had unit roots. The variables were subjected to a first level difference which involved creating a variable

that reflects the difference in scores for one time period. Following this procedure, firm size, and large individual achieved stationarity and hence the differenced values were used in the regression models. The cost efficiency and government remained non stationary and could not be differenced further as the unit root test requires a minimum of six (6) panels. Their p-values also remain constant which means the series is not mean-reverting. The cost efficiency and technical efficiency were therefore used in the regression models in their original form. Table 3 below presents the Hausman test for the regression models examining the relationship between the ownership, and financial performance of privatized firms.

**Table 3: The Results of the Hausman Test**

Variable	Hausman test result	Suitable Model
ROA	Prob> $\chi^2$ = 0.0037	FE
Tobin's Q	Nil	FE
Cost Efficiency	Prob> $\chi^2$ = 0.0008	FE
Technical Efficiency	Prob> $\chi^2$ = 0.0001	FE

The results indicate that FE regression model was the best suitable model for ROA, cost efficiency and technical efficiency since the p-values were significant. The results for the Tobin's Q yielded no results and this study opted to apply FE in this model to be consistent to results of other tests.

**The influence of Ownership Structure on performance of Privatized Companies**

Table 4 below presents the results of regression models used to examines the relationship between ownership structure and financial performance. The Table has four panels as four regression tests were done using ROA, the Tobin's Q, cost efficiency and technical efficiency. Panel A presents the regression results of the influence of ownership structure on the ROA, Panel B on the Tobin's Q, Panel C on the cost efficiency and Panel D on technical efficiency. The results include the coefficients of individual variables, robust standard error estimates; the coefficient of determination, R<sup>2</sup>; F-statistics and the t-statistic.

**Table 4: The Influence of Ownership Structure on Financial Performance**

Panel A : The influence of Ownership Structure on the ROA of Privatized Companies				
ROA	Coef	Robust Std. Err.	t	Prob.
Government	.0212***	.0045	4.73	0.002
Institutional	.0150***	.0048	3.15	0.016
Large individual	.0070	.0049	1.42	0.198
Dispersed	.0206***	.0048	4.30	0.004
Investment	.1670	.1069	1.56	0.162
Firm size (lag1)	.0059	.0213	-0.28	0.791
leverage	-.3237**	.1513	-2.14	0.070
constant	-1.482	.4386	-3.38	0.012
R <sup>2</sup> =0.4342		F= 13620.60		Prob> F = 0.0000
Panel B: The influence of Ownership Structure on the Tobin's Q of Privatized Companies				
Tobin's Q	Coef.	Robust	t	Prob.



		Std. Err.		
Government	0.2081**	0.0063	3.28	0.014
Institutional	.0043	.01379	0.31	0.765
large individual	.0405	.03834	1.05	0.327
Dispersed(lag1)	.0106	.0105	1.01	0.347
Investment(lag1)	1.785	1.0224	1.75	0.124
Leverage	-2.188*	1.1504	-1.90	0.099
constant	.4081	.9778	0.42	0.689
<b>R<sup>2</sup>=0.3154</b>		<b>F = 122.94</b>		<b>Prob&gt; F = 0.0000</b>

<b>Panel C: The influence of Ownership Structure on Cost Efficiency of Privatized Companies</b>				
Cost efficiency	Coef.	Robust Std. Err.	t	Prob.
Government	-.0031**	.0012	-2.69	0.031
Institutional	-.0009	.0007	-1.36	0.216
large individual	.0009*	.0004	2.09	0.075
Dispersed	-.0012**	.0009	-2.69	0.031
leverage(lag1)	.0278***	.0075	3.66	0.008
Firm size(lag1)	-.0148***	.0004	-3.70	0.008
constant	.3160***	.0845	3.74	0.007
<b>R<sup>2</sup>=0.5501</b>		<b>F= 311.93</b>		<b>Prob&gt; F= 0.0000</b>

<b>Panel D: The influence of Ownership Structure on the Technical Efficiency Privatized Companies</b>				
Technical Efficiency	Coef.	Robust Std. Err.	t	Prob.
Government	.0041	.0024	1.72	0.130
Institutional	0.007**	.0023	2.66	0.033
Large individual	.0096	.0092	1.05	0.329
Dispersed	.0048	.0026	1.84	0.109
Leverage	.0524	.0616	0.85	0.423
Investment	.08173	.1159	0.71	0.503
constant	-.0427	.2211	-0.19	0.852
<b>R<sup>2</sup>=0.0082</b>		<b>F= 8.00</b>		<b>Prob &gt; F = 0.0074</b>

The asterisks\*,\*\*and \*\*\* represent significance levels at 10%, 5% and 1% respectively

### The Influence of Ownership Structure on the ROA of Privatized Companies

Panel A of table 4 above presents the regression results of the influence of ownership structure on the ROA of privatized companies. A Hausman test identified FE as

the suitable regression model to analyze the effects of ownership structure on ROA. The FE controls the fixed effects of firm individual characteristics which could influence ROA. The model rejects variables that don't vary with time and consequently foreign ownership



was eliminated as most of the values were not varying. The procedure in Stata includes a robust standard error option to control for heteroskedasticity and contemporaneous correlation which may cause standard errors to be biased. The Stata procedure also automatically generates the F value which measures the overall fit of the model. The computed F value is 13620.60 and is significant at 1% significance level. This implies that the joint effect of the ownership variables on ROA is significant, although coefficients of some ownership variables are insignificant. The  $R^2$  is 0.4342 which means that the regression model explains 43.42 % of the variance in the ROA. The remaining variation of 56.58% is unexplained and could be attributed to other factors not included in the model.

The *t*-tests for individual coefficients show that government ownership has a positive and significant relationship with ROA at 1% levels of significance. The positive and significant findings contradict the property rights theory which asserts that state ownership is detrimental to firm performance. The results however support the agency theory which recognizes large shareholder have the potential to improve firm performance as they are more effective in monitoring managers. This also implies that when the government shareholdings decreases and private investors have rights to an income and decision making of a firm, the performance of a firm increases. The findings also support previous empirical studies which document a positive and significant relationship between large government ownership and ROA (Trien & Chizema, 2011; Tian & Estrin, 2008).

A positive significant relationship may also be an indicator that government ownership is crucial in a system where large number of

shareholders is dispersed. The government has retained 41.1% which means that legally, it is a major decision maker and therefore has incentives to influence financial performance. From the agency theory perspective, government as a large shareholder is more effective than dispersed shareholders in monitoring managers. It is also more effective than other private investors who also hold relatively smaller sizes of ownership. It is notable that shares owned by the government are held by the Treasury which is expected to exercise its powers as shareholder in monitoring and exerting pressure on managers to perform. It is also likely that the presence of government in the ownership structure decreases the likelihood of expropriation of corporate wealth by managers and other investors. The sale of majority government ownership also removes most of the Parastatals from the ambit of the State Corporations Act. This could have redefined the objectives of the companies and served to communicate the expectations of government in a privatized company. The reduction of subsidies by the government of such firms following privatization may also put pressure on managers to utilize the human, financial and physical assets more efficiently.

The institutional shareholders have a positive and significant relationship with ROA at 1% level of significance. A strong significant relationship is surprising as the institutional investors consisting of banks, mutual funds, insurance firms and pension funds hold a mean of 10% ownership. These investors are however more focused on profits as their cliental demand profits and consequently have incentives to enhance efficiency and profitability in firms where they invest. From a RBT perspective, institutional investors bring in managerial, technology and financial resources crucial to firm performance. The



results are consistent to other studies which document a positive relationship between institutional shareholders and firm performance (Kiruri 2013; Mishari *et al.*, 2012; Ongore *et al.* 2011; Uwuigbe & Olusanmi, 2012). The results are also consistent to the property rights theory which views institutional investors to be more focused in making profits and therefore can put pressure on the managers to generate profits and increase the value of their investment.

Large individual shareholders have an insignificant influence on ROA. This is consistent to the prediction of this study and with the agency theory which asserts that individual shareholders have no capacity to monitor managers or influence decision making in corporate boards. Large individuals hold a mean of 1% ownership in privatized firms which is considered insufficient to monitor managers or influence decision making by corporate boards. According to Maher and Anderson, (1999) an individual should have a substantial amount of ownership of about 5% to have any impact in monitoring managers and consequently firm performance. Surprisingly, dispersed shareholders have a positive and significant impact on ROA at 1% levels of significance. The findings contradict agency theory which asserts that diffuse shareholders lack capacity to collectively monitor managers. This argument, however fails to recognize dispersed shareholders demand dividends from former SOEs and therefore put pressure on managers to generate profits. The dispersed shareholders may influence decision making through the AGMs where they vote on key issues such as: election of directors, ratification of the auditor reports, approval of dividend and changes in by laws. They are also likely to protect themselves by selling their shares through which puts

pressure on managers to control capital flight. It can be argued that greater diffuseness in ownership can convey compensating advantages if the shareholders can influence decisions that affect their investments. The findings are consistent to those of Ongore *et al.*, (2011) who found a significant and positive relationship between dispersed shareholders and firm performance in listed companies in Uganda.

The control variables included in this regression model are capital investment, firm size, and leverage. Capital investment has an insignificant impact on ROA which contrasts the conventional view that investment in fixed assets increases prospective investment opportunities and associated with productivity. The insignificant results may however be attributed to the small percentage of investment by privatized firms. The average investment in privatized firms is 6.63% compared to the 13%, reported by Henessy and Whited (2005) in US corporations. The firm size has a negative and insignificant relationship on ROA. The results contradict the widely held view that large firms exploit economies of scale to hire more skilled managers and adopt new technologies which could improve performance (Himmelberg *et al.*, 1999). However, some reports indicate that some privatized firms experience managerial inefficiencies, corruption, overstaffing and political interference (KACC, 2010). The insignificant results could imply that the benefits of the large size are cancelled out by the managerial problems in privatized firms. Leverage also has a negative and significant relationship with ROA at 5% significance level. The results contradict the agency theory which views debt as a tool to enhance monitoring by lending institutions (Jensen & Meckling, 1976). The results may be attributed to passiveness of the role of lending



institutions which is not clearly specified in corporate governance guidelines. The disciplinary effects associated with leverage may also be cancelled out in privatized firms as they may experience increasing costs of borrowing associated with the money markets.

### **The Influence of Ownership Structure on the Tobin's Q and of Privatized Companies**

Panel B of table 4 presents results of the regression model examining the relationship between the Tobin's Q and the ownership structure of privatized firms. The FE regression model was used to examining the relationship and controls fixed firm individual characteristics that could influence the Tobin's Q. The model also included a robust standard error option to controls for heteroskedasticity and contemporaneous correlation which may cause the results to be biased. Consequently, foreign ownership was automatically eliminated as most of the values were not varying with time. The model also allows lagging of some independent variables to reduce the possible effect of unobserved heterogeneity and reverse causality. The model was significant when the dispersed ownership and investment were lagged once. This is an indicator that the past values of dispersed ownership and investment influence on the market value of privatized firms. The computed F value is 122.94 and is significant at 1% level of significance. This indicates that the joint effect of the ownership variables on Tobin's Q is significant, although the coefficient of some variables were insignificant. The  $R^2$  statistic is 0.3154, which means that the regression model explains 31.54% of the variance in the Tobin's Q. The 68.46% of the variation is unexplained and could be attributed to other factors. Firm size was automatically dropped from the regression model due to the suspected problem of multicollinearity. Firm size measured by total assets

may be correlated with other variables such as investment and leverage as they include firm size in the denominator.

The *t*-test shows government ownership has a positive and significant relationship with the Tobin's Q at 5% level of significance. The results suggest that the government enhances investors' confidence in privatized firms. This is inconsistent with the prediction of this study and with the property rights theory which asserts that state ownership impacts negatively on firm performance due to focus on multiple goals and also the wide separation between ownership and control (Jensen & Meckling, 1976). The finding is however consistent to empirical studies which document positive relationship between high state ownership and firm value (Ang & Ding, 2006; Wei, *et al.*, 2005; Tian & Estrin, 2008). The results in reference to privatized firms imply that the presence of government increases the investors' confidence. From an agency theory perspective, the government has the capacity to monitor managers more effectively in firms characterized by a large size of disbursed shareholders. The government ownership may give an assurance that shareholders investment will be protected from expropriation by managers and private investors. The state ownership may also lower uncertainty for investors as the government can use a wide range of measures to protect investors and reduce the likelihood of corporate failure. Consequently, the investors expect the government to intervene in the privatized firms to prevent any deficiencies by managers and private investors. The investors may also value state ownership positively as resources are likely to be used more efficiently if the state is a partner among other investors.

Institutional investors have an insignificant relationship with Tobin's Q. The results



contradicts the agency theory which views, institutions investors as effective in improving performance due to their focus on profits objectives and monitoring managers to act in the best interest of the shareholders. The results also contradict resource based theory which considers local institutional investors to be endowed with managerial and technological expertise to enhance the market value. These results are there inconsistent with others which report significant and positive relationship between institutional ownership and firm value (Agyei & Owusu, 2014; Mishari *et al.*, 2012). The insignificant results could however be attributed to the small size of institutional ownership as they hold only 10 % shares. The results suggest that the size of ownership is insufficient to influence the investors' confidence and consequently the market value of privatized firms. Large individual investors have an insignificant influence on the Tobin's Q. This is consistent with the agency theory which perceives individual shareholders to lack capacity to enhance firm value due to the small size of their investment. Individual investors hold only 1% ownership in privatized firms which is considered ineffective to influence market value of firm. The dispersed shareholders also have an insignificant impact on Tobin's Q. The findings confirm the agency theory which asserts that diffuse shareholders lack capacity to collectively monitor managers and therefore may not influence the market value.

Among the control variables, investment have an insignificant relationship with the Tobin's which may be attributed to the low level of investment in privatized firms. The average investment in privatized firms in Uganda is 6.63% compared to 13% reported by Hennessy and Whited (2005) in U.S. corporations. The small size of investment may be insufficient to impact on performance and consequently the

market value of privatized firms. Leverage has a negative relationship with the Tobin's of privatized firms which is significant at 10 % level. Leverage as a governance mechanism is expected to enhance monitoring by banks. The findings may imply the level of debt obligations with privatized companies may not have put pressure on the managers to enhance performance. It may also imply that the investors viewed debt negatively as firms incur relatively higher costs of debt following the withdrawal of guarantees by the government after privatization.

### **The Influence of Ownership Structure on Cost Efficiency of Privatized Companies**

Panel C of table 4 presents the regression test results of the relationship between cost efficiency and ownership structure of privatized firms. The FE regression model with a robust standard error option was used to control for firm fixed effects which could be sources of heteroskedasticity and contemporaneous correlation which could influence cost efficiency. The FE model also eliminated foreign ownership as most of the values were not varying with time. Investment was also dropped from the model due to a suspected problem of multi-collinearity which may arise due to measurement issues. Investment, leverage and firm size may be correlated as the denominator of leverage and investment ratios is total assets which are also an indicator of firm size. The computed F value is 311.91 and is significant at 1% level. This implies that the joint effect of the ownership structure variables on the cost efficiency is significant, although the coefficient of some ownership variables is insignificant. The  $R^2$  statistic is 0.5501 which indicates that the model explains 55.01 % of the variance in the cost efficiency. The



remaining variation of 44.09% is attributed to other factors not included in the model.

The *t*-test for individual coefficients indicates that government ownership has a negative and significant influence on cost efficiency at 5% levels of significance. The results suggest that when a government privatizes firms and retains large ownership, the agency conflicts between managers and shareholders may persist as top managers without any ownership of the firm are likely to be appointed by the government. The conflicts of interests may result into cost inefficiencies and expropriation of corporate wealth. The results are consistent to the property rights and the agency theories which associate state ownership with inefficiency. The findings are also supported by studies which found that the state ownership can influence cost efficiency negatively (Zelenyuk & Zheka, 2006; Yiwei *et al.*, 2011). The inefficiency could be attributed to the government focus on both welfare and economic objectives particularly where it has retained large size of ownership. This makes some privatized firms employ an input mix that does not match costs.

The local institutional shareholders have an insignificant relationship with cost efficiency. This is contrary to the prediction of the agency theory, which views institutional investors as having the capacity to reduce inefficient behavior in corporate entities. However the results could be attributed to a relatively small ownership in the individual firms which averages at 10%. The ownership is also held by numerous institutions which may make it more difficult for the investors to influence the firm managers to reduce operational costs. The results may also suggest that although, institutional shareholders may exert substantial pressure on managers, the costs of monitoring may cancel out the benefits as they hold only a

small size of ownership. Under such circumstances institutional investors, may therefore take a passive role in monitoring managers leading to insignificant influence on costs management in privatized companies. These results are consistent to studies which found that institutional ownership has no significant influence on cost efficiency (Pi & Timme, 1993).

Surprisingly the large individual shareholders have a positive and significant relationship with cost efficiency at 10% level. This is inconsistent with the agency theory which views individual shareholders to have no capacity to monitor managers due to their small size of their shareholding. Individual investors hold only 1% ownership in privatized firms. However a positive relationship could arise as large individual investors may interact closely with managers as they are among the top ten shareholders. They could also have some special decision making rights in firms where they invest. The individual investors are also vocal in decisions that influence their investments as they are also likely to bear consequences of inefficiency by managers. Dispersed shareholders have a negative and significant impact on cost efficiency at 5% level. A negative coefficient is an indicator that the firms are likely to experience agency problems in a system with a large size of dispersed shareholders. The results are also consistent to the agency theory which considers individual shareholders to be widely dispersed to have any capacity to influence performance. This finding is inconsistent with studies which find that individual shareholders influence firms to perform positively (Ongore *et al.*, 2011).

Among the control variables, leverage has a positive and significant influence on cost efficiency at 1% significance level. This is





consistent with the agency theory which recognizes debt monitoring mechanism by lending institutions to ensure that managers focus more efficient (Jensen & Meckling, 1976). The results may imply that banks were pressurizing managers of privatized firms to utilize corporate resources more effectively in order to repay loans. Firm size has a negative and significant relationship with cost efficiency at 1 % level of significance. This suggests that privatized firms have not taken advantage of their large size firms to exploit economies of scale and achieve higher efficiency. This is evident as most of the privatized firms have not attracted strategic partners who are more likely to bring in technology and expertise required to reduce costs.

### **The Influence of Ownership Structure on Technical Efficiency of Privatized Companies**

Panel D of table 4 presents the regression results of the relationship between technical efficiency and ownership structure of privatized firms. The Hausman test shows that an FE regression model is suitable to analyze the relationships. The FE model included a robust standard error option to controls the fixed individual firm characteristics which could cause heteroskedasticity and cross sectional dependence of errors and consequently impact on the technical efficiency. Foreign institutional ownership was eliminated as the values were not varying with time. The regression model also eliminates variables that may suffer from multicollineality. Firm size was also eliminated due to suspected problem of multicollineality. Firm size measured by total assets may be correlated with other control variables such as investment and leverage as their ratios include firm size (total assets) as the denominator. The computed F value is 8.00 and is significant at

1% level. This means that the joint effect of the ownership structure variables on technical efficiency is significant. The coefficient of determination  $R^2$  is 0.0082, implying that the regression model explains only 0.08% of the variance in the technical efficiency. This implies that the model is weak as it is only one ownership variable which has a significant relationship with the technical efficiency.

The *t*-tests on individual coefficients show that government ownership has an insignificant relationship with technical efficiency. The findings are inconsistent with the property rights theory which asserts that government ownership influences firm performance negatively. Several studies also document negative relationship between state ownership and technical efficiency (Lin *et al.*, 2009; Zelenyuk & Zhaka 2006; Ochi & Yosra 2012; Yiwei *et al.*, 2011). The results suggest that the sale of government ownership alone may not be the only defining factor in firm technical efficiency. Leibenstein (1966) ascribe inefficiency to insufficient internal and external pressure and incentives on the managers to reduce costs. The insignificant results could be attributed to government's focus on both economic and welfare objectives which may cancel any benefit associated with privatization.

The local institutional shareholders have a positive and significant influence on technical efficiency at 5% level. The institutional investors comprise of banks, pension and mutual funds which may stimulate technical efficiency in firms formally owned by the state. From a resource based theoretical view, institutions may have brought in technical expertise, financial resources and greater access to new markets which may increase production. The results are consistent to empirical studies which found a positive and



significant relationship between institutional investors and technical efficiency (Ravi & Hovey, 2013; Su & Dai, 2012). The large individual shareholders have an insignificant impact on technical efficiency which is consistent to agency theory that considers individual to have no capacity to influence performance due to the small size of ownership. Large individual shareholders own only 1% shares in privatized firms which is too low to have any impact on firm performance. The individual investors are largely venture investors and may not have technical expertise required to stimulate efficiency. The dispersed shareholders also have an insignificant influence on technical efficiency. This is expected as individual investors may have no avenues to interact with firms and consequently influence technical efficiency. The insignificant results support the agency theory which views dispersed shareholders to be too scattered to influence firm performance.

Among the control variables, leverage has an insignificant relationship to technical efficiency. This may imply that although, although banks may pressurize managers to perform, they may not have the expertise to influence technical efficiency. The insignificant results may imply that leverage alone may not be a key driver of technical efficiency. Some also authors indicate that technical efficiency is largely driven by technology and best practices in production (Leibenstein, 1966). Capital investment has an insignificant influence on technical efficiency. This contradicts conventional view that expenditure in fixed assets increases efficiency, production capacity and long term growth in a firm (Smith & Watts, 1992). An insignificant finding could however be attributed to the low investment by privatized firms. The average investment in privatized

firms is 6.63% compared 13% documented by Hennesy and Whited (2005) in U.S corporations.

## **CONCLUSION AND RECOMMENDATIONS**

This study investigated the influence of ownership structure on financial performance of privatized companies in Uganda. The results of the study show ownership structure has a significant relationship with financial performance of privatized companies. The results on individual coefficients show that government ownership has a positive relationship with ROA and the Tobin's Q, a negative and significant relationship with cost efficiency. Institutional shareholders have a positive relationship with ROA and technical efficiency while large individual investors have a positive relationship with cost efficiency. Dispersed shareholders have a positive relationship with ROA, negative and significant with cost efficiency. In view of these findings, this study recommends the Privatization Commission should restructure ownership in privatized companies to reduce government and dispersed ownership further and pass more control to private investors. The government should however retain some ownership in privatized firms to enhance shareholders confidence in protection of their investments and managerial monitoring. The institutional ownership should be enhanced to enable privatized companies to attract managerial and technical expertise crucial to enhancing financial performance. It is therefore recommended that each privatized company should have an institutional strategic investor with technical expertise and sufficient shareholding to influence decision making.



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