MODERATING EFFECT OF FIRM SIZE ON THE RELATIONSHIP BETWEEN FINANCIAL LEVERAGE AND FINANCIAL PERFORMANCE OF NON-FINANCIAL FIRMS LISTED IN THE NSE, KENYA

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ABSTRACT

Performance of non-financial firms is perceived to be influenced by firm size and financial leverage among other factors based on the theory of economies of scale. Most studies carried out in Kenya focused on financial firms and single set of performance measures hence, limited knowledge on the combined synergetic effect of accounting and market based measures of performance for non-financial firms. This study therefore sought to establish the moderating effect of firm size on the relationship between financial leverage and financial performance of non-financial firms listed in Nairobi Securities Exchange (NSE) using accounting based and market based measures of performance (ROE and Tobin's) and panel methodology. The study used a correlation research design. The target population was 47 non-financial firms listed at NSE between 2012 and 2018 where 28 firms were purposively sampled and pooled for 7 years to obtain 196 firm year observations. Firm size is a significant positive predictor of performance (ROE), β = 0.0972 (P = 0.0196) and Tobin's Q, β = 0.0578 (P = 0.0006) meaning a unit change in firm size leads to a significant increase in ROE and Tobin's Q of 0.0972 and 0.0578, respectively. Model coefficient interaction term was negative but significant for (ROE) β = -.0368563, (p = 0.001) and Tobin's Q, β = -.0368563), (p = 0.001) implying that firm size negatively moderates the relationship between financial leverage and performance. The study concludes that firm size moderates the relationship between financial leverage and financial performance. The study recommends that management of the non-financial firms listed at NSE should take into consideration the size of their firms in making leverage choices since firm size moderates this relationship negatively.

Key words: Moderating effect, Financial Leverage, and Firm Size.

INTRODUCTION

Statistics from Nairobi Securities Exchange (NSE) indicate that, financial firms have delivered an average operating profit margins of 42% more than double the average 19% from non-financial firms between 2012 and 2018. Financial firms have also dominated on net profit margins at 30% on average against 13% for non-financial firms during the same period. Total debt has also increased at a faster rate, from KES 36bn to KES 278bn in the same period. Consequently, net debt position has increased to KES 85bn in 2018 from KES 42bn in 2012 NSE (2018). Generally, financial leverage and firm size have been recognized in the literature as fundamental variables in explaining organizational performance. In the year 2018, listed non-financial firms at NSE contributed about 13.4% of the GDP. Despite their contribution to the economy, they continue facing numerous challenges ranging from declining profits, increasing debt levels, suspension or delisting at 21.3% from NSE. Statistics indicate that, while market capitalization at NSE increased

from KES 989.69 billion in December 2012 to KES 2778.6 billion in December 2018, 39% of these firms have recorded falling after-tax profits for the same period (NSE, 2018). On the contrary, non-financial firms listed at New York Stock Exchange have recorded increased after tax profits of 67% with market capitalization of more than KES.1600 trillion for the same period (NYSE, 2018).

From the existing literature, there are only a limited number of scholars who have studied the moderating effects in financial structure determinants, however the moderating effects were measured using dummies, subsamples or simple interaction terms in tabulated form, single accounting based measures of performance and failed to test the effect of both accounting based and market based measures of performance of listed non-financial firms. Literature on the moderating effect of firm size on financial leverage-performance of non-financial firms listed in NSE is unknown. Besides that, no known study has integrated the three variables: financial leverage, firm size and financial performance using panel methodology with ROE and Tobins'Q as proxies of performance in a single research for listed non-financial firms in a frontier market like Nairobi Securities Exchange. Hence, the current study assessed the moderating effect of firm size on the relationship between financial leverage and financial performance of non-financial firms listed in the NSE.

Objective

To assess the moderating effect of firm size on the relationship between financial leverage and financial performance of non-financial firms listed in the NSE, Kenya.

Hypothesis

H_0: Firm size has no moderating effect on the relationship between financial leverage and financial performance of non-financial firms listed in the NSE, Kenya.

THEORETICAL LITERATURE REVIEW

The Trade-off theory also postulates positive relation of tangibility as more tangible firms can deploy more debt to gain tax benefits at low cost by using their assets as collateral.

Based on these facts, literature has generally failed to consider the moderating role of some variables on the link between financial leverage and its determinants. The studies that did include them, focused on the role of size and its influence on the financial leverage or performance relationship. There is a dynamic financial leverage and performance link which varies in magnitude along the company size spectrum (Vithessonthi & Tongurai, 2015). In this case therefore, borrowing capacity grows with firm size, which enables companies to increase their leverage ratio and make more investments. This, in turn, increases profitability and firm size, thus establishing a link between financial leverage and financial performance.

EMPIRICAL LITERATURE REVIEW

Studies by Gonzalez & Gonzalez (2012) on the moderating effects in financial structure determinants using dynamic panel data tests on a sample of 3439 Spanish firms over the period 1995–2003, the study suggests the validity of the Signaling theory to explain financing decisions varying among small, medium-sized and large firms. The results from the study are partially consistent with both explanations but suggest a greater validity of pecking-order predictions for small firms. In small firms, the negative influence of profitability and the positive influence of investment opportunities and of intangible assets on firm debt predicted by the POT are heightened. However, no differences are observed between small and large firms in their speed of

adjustment to the target leverage as suggested by the TOT. La Rocca (2007) also found that corporate governance is one of the important moderators to the leverage and performance relation with a descriptive model in Italy. This thread of research affirms that if investment policies allow for value creation, financing policies, together with other governance instruments, can assure that investment policies are carried out efficiently while firm value is protected from opportunistic behavior.

Xayphone and Kimbara (2007) investigated the moderating effects of ownership types and management styles to corporate financing on the performance of SMEs in Vientiane Capital City, Lao PDR. Hierarchical moderated regression analyses was on data of 160 trading SMEs over the period 2002-2004. The results indicated that both debt and equity have statistically significant and positive impacts on profitability when considering the moderating effects of ownership types and management styles.

Gleason *et al*., (2000) studied the influence of culture on leverage-performance relation for 198 European Community retailers in 14 European countries, which were grouped into four cultural clusters. Data for 198 European Community retailers were obtained from the 1995 *Disclosure/worldscope* data base. Regression analysis was used in the study and it found that culture is an important moderator to the leverage-performance relation. Chao (2012) studied the influence of capital structure on organizational performance at Taiwan-listed info-electronics companies, with corporate governance being the Moderator. Hierarchical regression with convenience sampling was used to yield knowledge from the population, the linear Structural Equation Modeling (SEM) was adopted to verify the goodness-of-fit effects among the overall model, structural model and measurement model. Findings reveal that sound capital structure and satisfying corporate governance at Taiwan-listed info-electronics companies both exert a significant interactive influence on the organizational performance. Yung-Chieh (2013) studied innovation strategy as moderating factor to the leverage and performance relation in Taiwan listed photovoltaic companies**.** The study tested the goodness-of-fit effects of the overall model, structural model, and measurement model using Structural Equation Modeling (SEM) and identified a significantly positive extraneous or interactive effect of corporate innovation activities on the relationship between capital structure and corporate performance of Taiwan-listed photovoltaic companies. This study's author adopted SEM for modeling in order to explore how unobservable variables connect to one another in the Structural Model, whether the measurement model has measurement reliability, and how the overall model's goodness- of-fit effect is. In this study, the overall model had a satisfactory goodness- of-fit effect because x^2/d.f<5 and the values of GFl, AGF1 and NFl all exceeded 0.90, with a below -0.05 RMR.

Farooq *et al*. (2014) studied firm's strategy and market competition as moderator to the leverage-performance relation. Data was collected from 125 Pakistani textile firms listed at Karachi Stock Exchange (KSE) for the period of 2006 to 2011 from "financial statements analysis of companies (non-financial firms) listed at Karachi Stock Exchange'. Generalized linear model (GLM) regression analysis was employed. The data consisted of unbalanced panel data with 712 numbers of observations. The findings revealed that debt ratio, short term debt ratio and long term debt ratio all are negatively associated with profitability. It was also established that unit increase in short term debt ratio increases the profits by 3.5% in cost leadership strategy as compared to product differentiation strategy.

Abbasi and Malik (2015) investigated the moderating effect of firm size in the relationship of firm growth and firm financial performance. For this purpose, 50 non-financial firms from different sectors were targeted to get data for year 2012. The data was collected from the financial

statements of companies listed in Karachi Stock Exchange for year 2012. The results of regression analysis demonstrated that the alternative hypothesis of the research that firm size has moderating inspiration between independent variable (Firm growth) and dependent variable (Firm performance) is accepted.

Vithessonthi and Tongurai (2015) conducted studies in Thailand to examine whether firm size affects the relationship between leverage and operating performance during the global financial crisis of 2007–2009 using panel regression on all registered firms. From a data set of 496,430 firm-year observations of a sample of 170,013 mostly private firms, the researchers found that the magnitude of the effect of leverage on operating performance is non-monotonic and conditional on firm size. While panel regression results indicate that leverage has a negative effect on performance across firm size subsamples, the year-by-year cross-sectional regression results show that the effect of leverage on performance is positive for small firms and is negative for large firms.

The review of literature on the moderating role of firm size indicates that scanty research has been done on this variable. Gonzalez & Gonzalez (2012); Vithessonthi and Tongurai (2015); La Rocca (2007); Gleason *et al*., (2000); Abbasi and Malik (2015); Chao (2012); Yung-Chieh (2013); Xayphone and Kimbara (2007); found positive impacts on the relationships using dynamic panel data tests, panel regression, descriptive model, Regression analysis, Hierarchical regression with convenience sampling and linear Structural Equation Modeling (SEM), cross –sectional data, Hierarchical moderated regression analyses and Generalized linear model (GLM) regression analysis. Some studies reviewed focused on either community retailers or on all registered firms, while the rest focused only on one sector, small and medium enterprises as opposed to listed firms. Besides that, they used single set of performance measures. On the contrary, Farooq *et al.* (2014) applied linear model (GLM) regression analysis with unbalanced panel data and found a negative impact on the relationship focusing on only one sector.

RESEARCH METHODOLOGY

The present research used quantitative paradigm and since the cause and effect relationship between quantitative variables was sought, a correlational research design was adapted. The study was carried out in the Nairobi Securities Exchange (NSE) in Nairobi City, the capital city of Kenya. The population of the study comprised all non-financial firms listed at NSE Kenya from 2012 to 2018 from which 28 firms out of a total of 47 non- financial firms were purposively sampled for use in the study. Data on the analysis of financial leverage, firm size and performance was extracted from financial reports of listed companies and summaries provided by the NSE. The experts opined that the data items adequately and sufficiently represented the content for each construct. The findings revealed a unit test for Financial leverage; Adjusted t*= -14.5720, p= 0.0000, Firm size = -84.0485, Tobin's Q= -7.6823, p= 0.0000, and ROE Adjusted t* =-14.6934, p=0.000 implying that all the panels contained unit root. All other tests of assumptions of panel regression indicated that there were no violations of the model requirements. Data was analysed using panel regression model as indicated.

The Model is developed to study the relationship between financial leverage and performance while moderating the effects of firm size.

It is a panel data regression model on the combined effect of both the independent variable and the moderating variable on dependent variable.

$ROE_{it} = \alpha + \beta_l DER_{it} + \beta_2 FSit + \beta_3(DER \times FS) + \varepsilon_{it}$..... (3.9)

$ROE_{it} = \alpha + \beta_l DER_{it} + \beta_2 FSit + \beta_3 TANG_{it} + \beta_4 FAGE_{it} + \beta_5(DER \times FS) + \varepsilon_{it}$..... (3.10)

$TOBIN'S\ Q_{it} = \alpha + \beta_l DER_{it} + \beta_2 FSit + \beta_3(DER \times FS) + \varepsilon_{it}$..... (3.11)

$TOBIN'S\ Q_{it} = \alpha + \beta_1 DER_{it} + \beta_2 FSit + \beta_3 TANG_{it} + \beta_4 FAGE_{it} + \beta_5(DER \times FS) + \varepsilon_{it}$.....(3.12)

Where;

ROE$_{it}$ = is the measure of Performance of firm *i* during time *t*;

TOBIN'S Q$_{it}$ = the ratio of market capitalization to book value of assets of firm *i* during time *t*. This equally represents financial performance of firms.

DER$_{it}$ = Debt Equity ratio as a proxy of financial leverage of firm *i* during time *t*;

$\beta_1, \beta_3, \beta_3, \beta_4, \beta_5, \beta_6$ = the intercept/regression coefficients for model 1, 2 and 3

FS$_{it}$ = firm size which is a moderator variable. This variable was measured by ratio of sales to total assets of firm *i* during time *t*;

α = the slope of the regression; it measures the unit change in y associated with a unit change in x

TANG$_{it}$ = Asset Tangibility of Firm *i* during time *t*. (conceptual framework - figure 1.7)

FAGE$_{it}$ = Firm Age of Firm *i* during time *t*. (conceptual framework - figure 1.7)

ε_{it} = the error term within a confidence interval of 5% at time t

RESULTS AND DISCUSSIONS

The first model entailed return on assets with first stage seeking the regression without controlling for the effects of age and asset tangibility of the firms. The findings are presented as shown in Table 1. The model used entailed the financial leverage as the factor variable, firm size as the moderator variable and financial performance as the function of both the moderator and predictor variables.

Table 1: Moderating Effect of Firm Size on the relationship between Financial Leverage and Financial Performance using ROE

Fixed-effects (within) regression			**Number of observations**		**=**	**196**
Group variable: ID			**Number of groups**		**=**	**28**
R-sq: within	= 0.1359		Observations per group: min		=	7
Between	= 0.1224		F(3,165)		=	8.65
Overall	= 0.1238		Prob > F		=	0.000
corr(u_i, Xb)	= 0.0629					
ROE	Coefficient	Std. Err.	T	P>|t|	[95% Conf. interval]	
FS	.1256432	.0310904	4.04	0.000	.064257	.1870294
FL	.0731858	.0175878	4.16	0.000	.0384596	.1079121
Interaction term	-.0368563	.0113375	-3.25	0.001	-.0592416	-.0144711
Cons	-.0190881	.0405934	-0.47	0.639	-.0992377	.0610614
Sigma_u	.17243698					
Sigma_e	.0886065					
Rho	.79111396	(fraction of variance due to u_i)				
F test that all	u_i=0:	F(27, 165) = 25.55		Prob > F = 0.0000		

Source: Field Data, 2018

The findings in Table 1 indicates that the model explains contribution of 12.38%. (R square overall=0.1238) which is significant, F (3,165) = 8.65, Prob > F=0.000. The model main effects indicates that financial leverage had a positive and significant effect on return on equity of the firms, (coefficient=0.0731858), t (196) =4.16, P>|t|=0.000 as well as the moderator variable, which is the firm size, (coefficient=0.1256432, t (196) =4.04, P>|t|=0.00). The model coefficient interaction term was however negative but significant (coefficient=-.0368563, t (196) =-3.25, P>|t|=0.001). The regression coefficient of the product term (firm size× financial leverage) on return on assets is negative, which indicates that the moderating variable (firm size) weakens the causal effect of financial leverage on return on equity. This therefore implies that an increase in firm size gives negative effects on return on equity of the firms. Further findings were presented after controlling for other covariates which entail age of the firm and asset tangibility. The findings are presented as shown in Table 2.

Table 2 : Moderating Effect of Firm Size on the relationship between Financial Leverage and Financial Performance using ROE while Controlling for Asset Tangibility and Firm Age

Fixed-effects (within) regression			**Number of observations**		**=**	**196**
Group variable: ID			**Number of groups**		**=**	**28**
R-sq: within	= 0.3480		Observations per group: min		=	7
Between	= 0.0371		F(5,163)		=	17.40
Overall	= 0.1083		Prob > F		=	0.0000
corr(u_i, Xb) =	-0.6914					
ROE	Coefficient	Std. Err.	T	P>|t|	[95% Conf. interval]	
FS	.1886993	.0675796	2.79	0.006	.0552548	.3221437
FL	.2595453	.0378473	6.86	0.000	.184811	.3342796
FS*FL(interaction)	-.0842691	.0244113	-3.45	0.001	-.1324722	-.0360661
AT	.062369	.0864506	0.72	0.472	-.1083386	.2330765
Age of firm	-.0063593	.0068624	-0.93	0.355	-.01991	.0071914
Cons	.1468062	.405592	0.36	0.718	-.6540856	.9476981
Sigma_u	.25766275					
Sigma_e	.19020568					
Rho	.64727695	(fraction of variance due to u_i)				
F test that all	u_i=0:	F(27, 165) =	3.36		Prob > F = 0.0000	

Source: Field Data, 2018

The findings indicates that the model accounts for an overall variance of 10.83% in return on equity (R square overall=0.1083). The overall model was also found to be significant, F(5, 163)=17.40, Prob > F = 0.0000. This means that even after controlling for the effect of firm age and asset tangibility, firm size still significantly moderates the relationship between financial leverage and firm performance based on return on equity. Each of the model coefficients were therefore examined. Starting with firm size, the findings indicate that when all these variables were used in the model, firm size has a positive (coefficient=.1886993) and significant P>|t|=0.006 effect on return on equity. Financial leverage, which is the main independent variable, also maintained a positive (coefficient=.2595453) and significant P>|t|=0.000 effect on return on equity.

A close look at the interaction term, (the interaction between firm size and financial leverage) indicates that the term has a negative (coefficient = -.0842691) and significant (P>|t|=0.001) effect on return on equity. This implies that an increase in firm size gives negative effects on return on

equity of the firms. Precisely, as the size of the firm increases, the effect of financial leverage on return on equity reduces. Therefore firm size can be said to negatively moderate the relationship between financial leverage and return on equity.

The second measure of financial performance, which is Tobin's Q was also regressed against the model covariates in the moderation analysis. Then firm size was tested to find out if it moderated the relationship between financial leverage and firm performance based on Tobin's Q. The findings are presented as shown in Table 3.

Table 3 : Moderating Effect of Firm Size on the relationship between Financial Leverage and Financial Performance using Tobin's Q

Fixed-effects (within) regression			**Number of observations**		**=**	**196**
Group variable: ID			**Number of groups**		**=**	**28**
R-sq: within	= 0.1359		Observations per group: min		=	7
Between	= 0.1224		F(3,165)		=	8.65
Overall	= 0.1238		Prob > F		=	0.0000
corr(u_i, Xb)	= 0.0629					
Tobin's Q	Coefficient	Std. Err.	T	P>|t|	[95% Conf. interval]	
FS	.1256432	.0310904	4.04	0.000	.064257	.1870294
FL	.0731858	.0175878	4.16	0.000	.0384596	.1079121
FS*FL(interaction)	-.0368563	.0113375	-3.25	0.001	-.0592416	-.0144711
Cons	-.0190881	.0405934	-0.47	0.639	-.0992377	.0610614
Sigma_u	.17243698					
Sigma_e	.0886065					
Rho	.79111396	(fraction of variance due to u_i)				
F test that all	u_i=0:	F(27, 165) = 25.55		Prob > F = 0.0000		

Source: Field Data, 2018

The findings in Table 3 indicates that the overall model accounted for an overall variance of 12.38% in financial performance based on (coefficient=0.1238). The results also shows that the model is significant, F(3,165)=8.65, P>|t|=0.000. This means that the model accounts for 12.38% change in return on equity and the rest of the variance (87.62%) is accounted for by other variables not included in the model. An examination of each of the model coefficients indicates that firm size had the strongest unique contribution (coefficient=.1256432) which was positive and significant P>|t|=0.000 followed by financial leverage (coefficient=.0731858) which was also positive and significant P>|t|=0.000. The main aim was to assess the moderating effect of firm size on the relationship between financial leverage and performance. The findings indicate that the coefficient of the interaction term (firm size ×financial leverage) is negative (coefficient = -.0368563) and significant P>|t|=0.001, implying that firm size negatively moderates the relationship between financial leverage and performance. This therefore means that as the size of the firm increases, the effect of financial leverage on performance significantly reduces. It can thus be concluded that firm size negatively moderates the relationship between financial leverage and performance of the firms.

Further analysis of the moderating role of firm size on the relationship between financial leverage and firm performance based on Tobin's Q was carried out while controlling for the effect of age and assent tangibility of the firms. The findings are presented as shown in Table 4.

Table 4: Moderating Effect of Firm Size on the relationship between Financial Leverage and Financial Performance using Tobin's Q while Controlling for Asset Tangibility and Firm Age

Fixed-effects (within) regression			**Number of observations**		**=**	**196**
Group variable: ID			**Number of groups**		**=**	**28**
R-sq: within	= 0.1452		Observations per group: min		=	7
Between	= 0.0162		F(5,163)		=	5.54
Overall	= 0.0242		Prob > F		=	0.0001
corr(u_i, Xb) =	-0.4493					
Tobin's Q	Coefficient	Std. Err.	T	P>|t|	[95% Conf. interval]	
FS	.1282414	.0315026	4.07	0.000	.0660357	.1904472
FL	.0747485	.0176427	4.24	0.000	.0399107	.1095862
FS*FL(interaction)	-.0380235	.0113794	-3.34	0.001	-.0604936	-.0155534
AT	-.0233724	.0402994	-0.58	0.563	-.1029486	.0562037
Age of firm	-.0036917	.003199	-1.15	0.250	-.0100084	.0026251
Cons	.2096405	.1890686	1.11	0.269	-.1636991	.5829801
Sigma_u	.20589768					
Sigma_e	.08866529					
Rho	.84356832	(fraction of variance due to u_i)				
F test that all	u_i=0:	F(27, 165) = 23.69		Prob > F = 0.0000		

Source: Field Data, 2018

The findings in Table 4 indicates that the overall model accounted for 2.42% change in firm performance after controlling for other covariates which includes the age and asset tangibility of the firm (R square=0.0242). These findings were positive and significant, F(5,163)=5.54, P>|t|=0.0001. Further examination of the model coefficients indicates that firm size had a positive and significant effect on financial leverage (coefficient= .1282414, P>|t|=0.000) as well as financial leverage (coefficient= .0747485, P>|t|=0.000).

The findings further shows that there was a negative and significant effect of the interaction term (coefficient= -.0380235, P>|t|=0.001) on financial performance implying that firm size negatively moderates the relationship between financial leverage and firm performance. Therefore as the size of the firm increases, the effect of financial leverage on firm performance reduces. This means that firm size causes financial leverage to result in low market value of the firms. Other covariates that were controlled for (asset tangibility and age of the firm had non-significant model coefficients implying that they did not have a direct effect on financial performance of the firms.

A comparison of the model between group and within group variances for the two models was also assessed. Examining the within group variance, it is clear that before controlling for age and asset tangibility of the firms, the variance was 13.59%. After controlling for the two variables, the variance was 14.52%. This means that there was an increase of 0.93% variance. This implies that age of the firm and assent tangibility may have indirect impact on the performance of the firms.

The variance of the financial performance between the firms was also assessed. The findings indicate that before controlling for age and asset tangibility of the firms during moderation, the variance between the firms performance accounted for by financial leverage was 12.24%. However, after controlling for asset tangibility and age of the firm, the variance was 1.62 percent. This implies that there was a great reduction in the variance between the firms, by a margin of 10.62%. This implies that age and asset tangibility have some indirect effect of the financial leverage-firm size and performance relationship when compared between the firms.

Further graphical analysis was carried out to explain in detail the moderating role of firm size on the relationship between financial leverage and firm performance. The findings on the moderating

effect of firm size on the relationship between financial leverage and ROE are presented as shown in Figure 1.

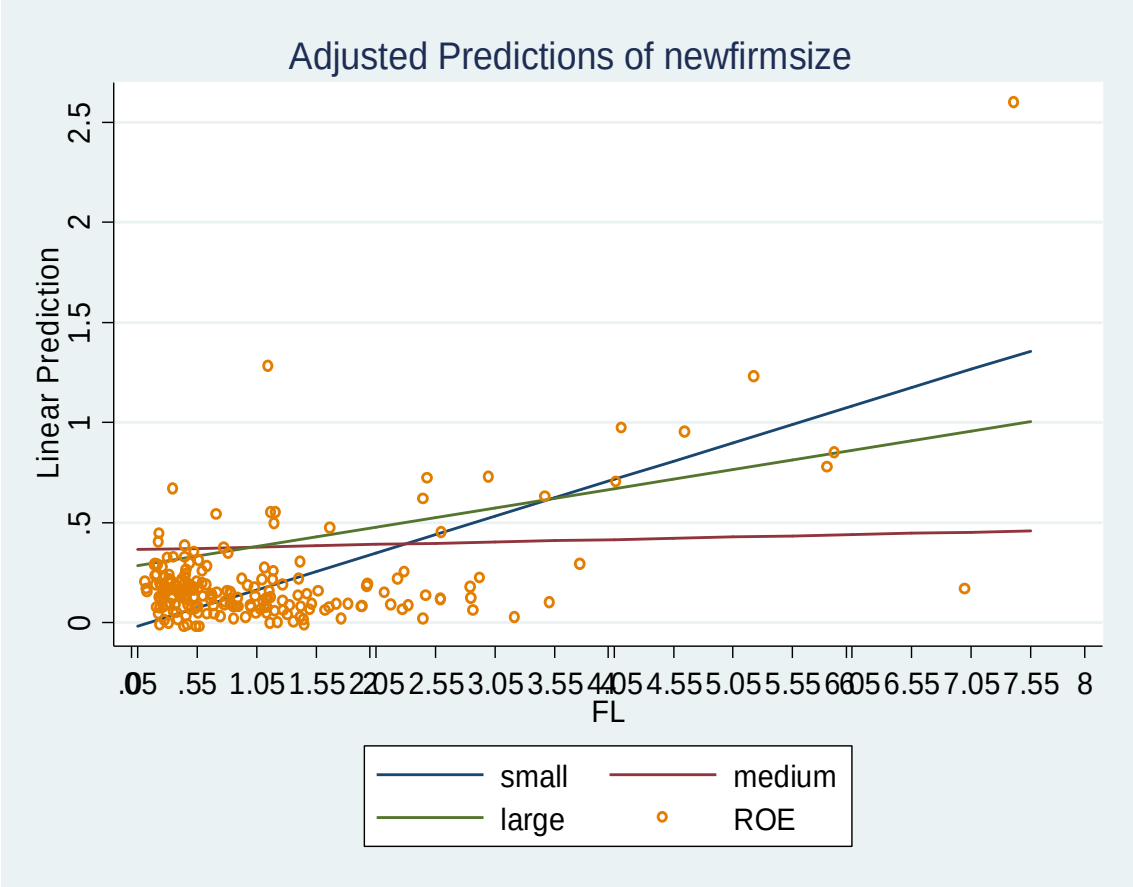

Figure 1: Graphical Analysis of Moderation on FL-ROE relationship
Source: Field Data, 2018

The findings as shown in Figure 1 indicate that for medium firms, the slope remains constant as change in financial leverage increases. However, there is an increase in ROE for smaller firm size as compared to larger firm size. The findings also indicate an interaction in the lines as the financial leverage increases. It can be concluded from these findings that there the value of ROE increases with smaller firm size as compared to large firm size while factoring in financial leverage. Thus firm size negatively moderates the relationship between financial leverage and firm performance.

Further findings on the moderating role of firm size on the relationship between financial leverage and Tonib's Q are presented as shown in Figure 2 below.

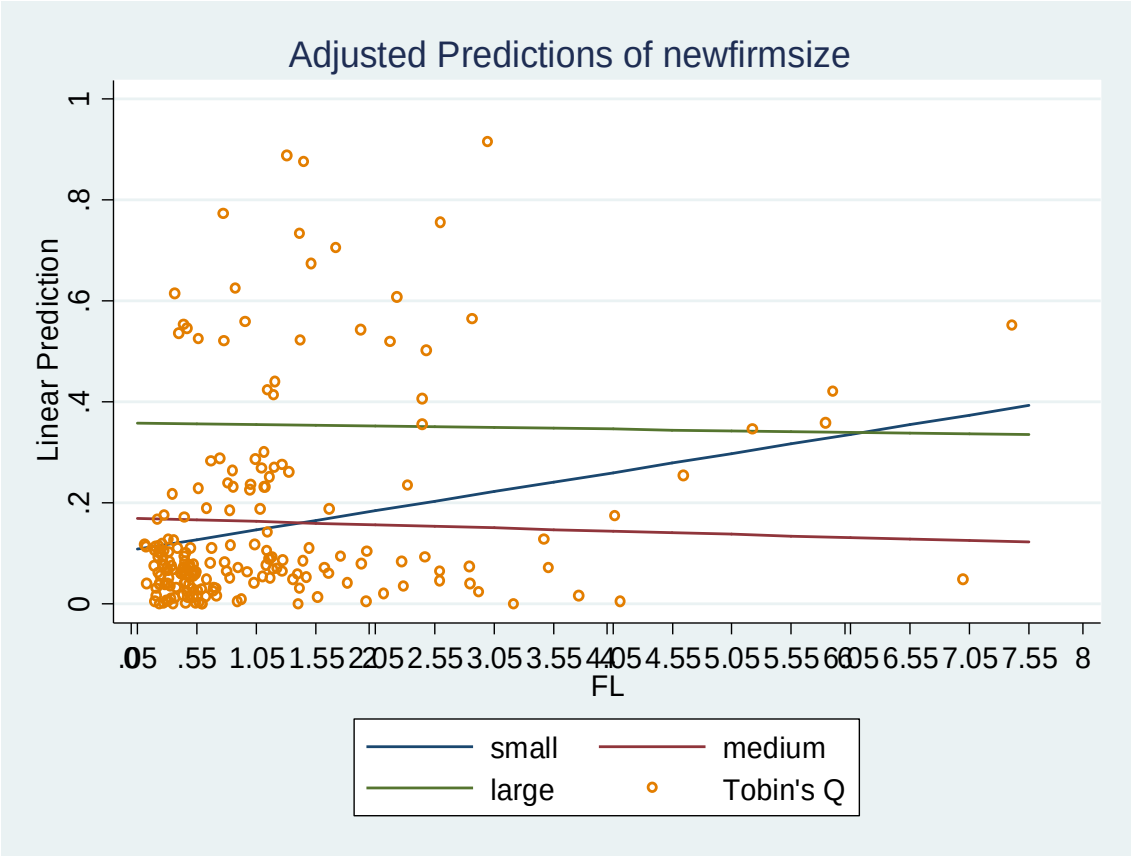

Figure 2: Graphical Analysis of Moderation on FL-Tobin's Q relationship
Source: Field Data, 2018

The findings indicates that as the financial leverage increases, Tobin's value for medium firms reduces. This is also observed for the large firms, which shows a decline in the value of Tobin's Q as the financial leverage increases. This explains the reason for persistent poor performance of Mumias Sugar Company, Uchumi supermarkets, and Kenya Airways. For the last one decade, these firms have reported losses in terms of billions of shillings among others (Kenya Economic Survey, 2018). However, there is increase in the value of Tobin's Q for smaller firm size as the financial leverage increase. The findings also shows that the value of Tobin's Q is generally low for medium firms as compared to large firms. For smaller firms, the value of Tobin's Q increases leading to an interaction across the medium and large firms. This implies that firm size moderates the relationship between financial leverage and Tobin's Q, negatively thus resulting to negative moderation.

The analysis was to test the null hypothesis (H_O) firm size has no moderating effect on the relationship between financial leverage and financial performance of firms listed in the NSE. The study rejects the null hypothesis and accept the alternative hypothesis (H_A) firm size has moderating effect on the relationship between financial leverage and financial performance of firms listed in the NSE. Hence it can be concluded that the change in firm performance reduces with increase in financial leverage due to change in firm size.

The findings of this study are similar to those of Vithessonthi and Tongurai (2015) found that the magnitude of the effect of leverage on operating performance is non-monotonic and conditional on firm size. Panel regression results also indicated that leverage has a negative effect on performance

across firm size subsamples, the year-by-year cross-sectional regression results show that the effect of leverage on performance is positive for small firms and is negative for large firms.
Other moderating elements such as cooperate governance, culture and innovation strategy as indicated by different studies inclusive of La Rocca (2007), Gleason *et al*., (2000), and Yung-Chieh (2013) indicates moderation. All these studies supports that there is moderation although using different moderators. The study findings are also strongly supported by the economic theory which formed the basic guide. Economic theory prescribes that increasing firm size allows for variation advantages because the size of the firm may enables it gain or lose leverage on the economies of scale to attain higher or lower profitability. As a proof of the theory, there is indeed a strong effect of firm size on the relationship between financial leverage and firm performance. This also confirms the Tradeoff theory which permits to make the following predictions. First, a positive relationship between financial leverage and financial performance is expected, since debt enables firms to lower their tax expense and agency problems. Second, company size and leverage are also expected to be positively linked, but firm size may not enhance the financial leverage-firm performance relationship positively. Therefore it can be concluded that firm size negatively moderates the relationship between financial leverage and firm performance. Hence economic theory coupled with the signaling and trade off theories, support that firm size remains the center player in the financial leverage-performance relationship. Therefore for the present study, it can be concluded that firm size negatively moderates the relationship between financial leverage and performance leading to a reduction in predictive power of financial leverage especially based on ROE as a function of financial leverage

SUMMARY OF RESEARCH FINDING

The study sought to determine the influence of firm size on financial performance of non-financial firms listed in NSE. The variance in firm performance explained by firm size was significant. Using fixed effects model, the findings on the effect of firm size on financial performance of the firms was significant. A comparison for the effect of firm size on firm performance using return on equity and Tobin's Q revealed that firm size accounted for more variance in Tobin's Q as compared to return on equity.

CONCLUSION AND RECOMMENDATIONS

A positive relationship between financial leverage and financial performance is expected, since debt enables firms to lower their tax expense and agency problems. Besides that, company size and leverage are positively linked, but firm size may not enhance the financial leverage-firm performance relationship positively. Therefore it can be concluded that firm size negatively moderates the relationship between financial leverage and firm performance. The study recommends that management of the non-financial firms listed at NSE should take into consideration the size of their firms in making leverage choices since firm size moderates this relationship negatively.

REFERENCES

Abbasi, A., & Malik, Q. A. (2015). Firms' size moderating financial performance in growing firms: An empirical evidence from Pakistan. *International Journal of Economics and Financial Issues*, *5*(2), 334-339.

Chao, C. H. (2012). The Influence of Capital Structure on Organizational Performance at Taiwan-Listed Info-Electronics Companies: Using Corporate Governance as the Moderator. *American Journal of Business and Management*, *1*(2), 60-69.

Farooq, U., Ashraf, A. A., & Ahmad, N. (2014). Investigating the Moderating Role of Firm Strategy in the Relationship between Leverage and Performance. *Middle-East Journal of Scientific Research*, *21*(2), 341-346.

Gleason, K. C., Mathur, L. K., & Mathur, I. (2000). The interrelationship between culture, capital structure, and performance: evidence from European retailers. *Journal of business research*, *50*(2), 185-191.

González, V. M., & González, F. (2012). Firm size and capital structure: evidence using dynamic panel data. *Applied Economics*, *44*(36), 4745-4754.

Jaggi, B., & Gul, F. A. (1999). An analysis of joint effects of investment opportunity set, free cash flows and size on corporate debt policy. *Review of Quantitative Finance and Accounting*, *12*(4), 371-381

La Rocca, M. (2007). The influence of corporate governance on the relation between capital structure and value. *Corporate Governance: The international journal of business in society*, *7*(3), 312-325

NSE (2018). History of organization. Nairobi: Nairobi Securities Exchange. Retrieved May 13, 2019 from htt://www.nse.co.ke/about-nse/listed-companies/list.html.

NYSE Composite Index. http://www1.nyse.com/about/listed/nya_characteristics.shtml Retrieved 21 June 2019

Vithessonthi, C., & Tongurai, J. (2015). The effect of firm size on the leverage–performance relationship during the financial crisis of 2007–2009. *Journal of Multinational Financial Management*, *29*, 1-29.

Xayphone, K., & Kimbara, T. (2007). Corporate financing and performance of SMEs: The moderating effects of ownership types and management styles. *Malaysian Management Review*, *42*(2), 119-133.

Yung-Chieh, C. (2013). The effects of capital structure on the corporate performance of Taiwan-listed photovoltaic companies: A moderator of corporate innovation activities. *Journal of Global Business Management*, *9*(1), 92.