

Modified Dupont Identity And Financial Performance Of Listed Non-Financial Companies In Kenya

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Abstract: Financial performance of listed non-financial companies at the Kenya's securities market has been faced with several challenges. These challenges range from state of financial uncertainty to bankruptcy. This study investigated the effect of modified DuPont identity factors as key performance forces that explain financial performance as measured by return on equity of Non-financial firms companies in Kenya, a case of Nairobi securities exchange. Recent studies had indicated 74% of the firms in the Nairobi Securities Exchange either faced financial uncertainty or bankruptcy. The study used key modified DuPont identity factors related to firm's performance including tax burden management, interest burden management, Operating efficiency, asset utilization efficiency and financial leverage. A theoretical and empirical review of literature was done to establish the research gaps in the area. Shareholders, Hoffman's tax planning, Modigliani and Miller, trade-off agency supported the study. A causal research design was employed to conduct the research. Secondary unbalanced panel data from year 2011 through 2017 using data collection schedules was done. A census study of forty six non-financial companies was done. The analysis of data was done using R-programme and panel regression models developed. Descriptive, inferential and relational statistics used were tested at five percent significant level. The Hausmann diagnostic test was used to determine choice of regression model. The random effect model was eventually chosen and the results indicated tax burden management, asset utilization efficiency were significant in influencing the return on equity of non-financial firms positively. Further the financial leverage was significant in influencing the results of the firms negatively. The variable interest burden management and operating efficiency were insignificant in this study. The research has a great significance in suggesting key result drivers in corporate earning power management. Management of corporates will use the results of this study to consider and implement different and diverse corporate financial strategies to improve financial results of non-financial firms in the country and worldwide in gene.

I. INTRODUCTION

Kim (2016) identified the Dupont model as a valid model to use in measurement of performance. Key performance drivers of the DuPont model include the net profit margin, asset turnover and financial leverage.

Nanavati(2013) asserts that the limitation of not being able to determine the optimal debt level in the three step model triggered development of the modified ,five step model(Modified DuPont Identity) ,which breaks net profit margin further to measure the effect of tax efficiency, borrowing charges(interest) and operating efficiency. The modified DuPont analysis evaluates a company's potential to increase its return on equity.

STATEMENT OF THE PROBLEM

Financial performance of listed non-financial companies at the Nairobi securities exchange has been faced with several challenges. Four of the listed companies did not trade in the years 2011 through 2017 with three of the non-trading companies being non-financial firms. The reasons cited were delisting or suspensions due to poor financial performance (NSE, 2016).

Several companies issued profit warnings in the year 2015, 2016 and 2017. Out of these, Twelve in 2015, seven in 2016 and nine in 2017 were non-financial Companies. In addition many non-financial companies have reported heavy

losses in the period under study including Kenya airways and Uchumi supermarkets (NSE, 2016).

Samira (2013) put seventy four percent of the listed companies as either facing financial uncertainty or distress levels. He specifically puts failed or financially distressed companies at twenty eight point six percent; those on grey zone (uncertainty) at forty five point seven percent and twenty five point seven percent are in safe zone. Samira examined the traditional Z-Score variables using Altman model which predicts the bankruptcy of companies at over 70 percent accuracy. (Diakomihalis, 2012).

RESEARCH HYPOTHESES

Ho1: Tax burden Management has no significant effect on financial performance of listed Non-financial companies.

Ho₂: Interest Burden Management has no significant effect on financial performance of listed Non-financial companies.

Ho₃: Operating efficiency has no significant effect on financial performance of listed Non-financial companies.

Ho₄: Asset utilization efficiency has no significant effect on financial performance of listed Non-financial companies.

Ho₅: Financial Leverage has no significant effect on financial performance of listed Non-financial companies.

SIGNIFICANCE OF THE STUDY

The management of listed firms will find the report useful in understanding how the variables affect their performance, benchmarking purposes and strategy formulation.

The Investment advisors will be able to use it to determine appropriateness of certain financial decisions and development of policy frame work related to the research variables. It is anticipated advisors will be able to lead companies on financial project advisory based on the variable indexes and strength relationship derived from this study.

Academicians and researchers will use the research for scholarly purposes. The contributed new knowledge in this area will help them in coming up with new research problems, critic the findings and make appropriate recommendations.

II. THEORETICAL FRAMEWORK

SHAREHOLDERS THEORY

According to Friedman (1970), firms that diligently seek to serve the interest of shareholders align their strategies to create more value to shareholders. The main goal of the firm is to pursue shareholders wealth and that corporate social responsibility is a secondary goal at the discretion of shareholders and not management. The shareholders wealth maximization was shown by Return on Equity.

HOFFMAN'S TAX PLANNING THEORY

According to Hoffman (1961), tax planning strives to re-direct cash flows, which would be paid to revenue authorities, to corporates. Tax planning activities are required and

necessary when they decrease taxable income to minimum, whilst retaining or increasing accounting income. This theory informed tax burden variable.

MODIGLIANI AND MILLER'S PROPOSITIONS ON CAPITAL STRUCTURE

Modigliani and Miller (1958) in proposition I concluded that capital structure is irrelevant in evaluating a firm's value (Ebaid, 2009). This is regarded as 'Proposition I'. The theorists postulated that a business organization's value is not dependent on its ratio of debt and equity in its capital structure. The theory observed that the average cost of capital for any entity is completely delinked and unrelated to its capital structure and is equivalent to the capitalization rate of a pure equity stream of its level. Further it was averred that a firm's value is assessed by the real assets it possesses. This assumption was premised on a perfect capital market, without bankruptcy and taxation costs, and perfect information. Modigliani and Miller (1958) originally focused on the derived benefits of debt finance through the impact of corporate tax.

Modigliani and Miller (1963) later amended their deductions about the linkage between a business organization's value and its combination of capital structure. The theorists reached a conclusion that a tax advantage can be yielded by using debt. Incurring more debt reduces the amount of tax the business is required to pay. They asserted that the most favorable capital structure for an enterprise is one that entirely uses debt without any equity. Modigliani and Miller's proposition II were based on the supposition of a perfect capital market without any taxation and bankruptcy costs, and perfect information.

Alifani and Nugroho (2013) concluded that business enterprises prefer to hold up the debt in their capital structure owing to the tax shield advantage due to the payment of interest and this stimulates the entity's market value.

The proposition I was in line with asset use efficiency which is an independent variable because it proposes real assets are the value drivers in the firm. Proposition II was in line with tax burden management, interest burden and financial leverage which are all independent variables in this study.

EMPIRICAL LITERATURE

TAX BURDEN AND FINANCIAL PERFORMANCE

Constantin (2012) studied 90 companies in Romania and interpreted the correlation at ten percent significance between variables dependent, ETR(effective tax rate) and the second independent variable, ROE, they noted that this is a negative one. Other key variables in the model included sales margin, asset utilization ratio and size of the companies. Thus, the profitability of a company influences in the opposite way the effective tax rate. As a conclusion, they noted that, to an increase of one percent of the actual share of ROE, corporation tax from next year would decrease with point zero one five percent. This confirmed the assumption made that a

firm would give stronger evidence of effective management of the taxes, achieving reduced effective tax rates.

Alloza(2016) on his study in USA panel data of American households headed by adults of between 25-65 years on effect of tax rates on income mobility concludes a unit percent marginal tax rate increase can reduce probability of the income mobility of an economic unit by point eight percent .The study used linear probability model to reach conclusions. Tax burden therefore impliedly was found to influence the net income negatively at 0.01 significance level.

Jennings, Weaver and Mayew (2011) examined a huge sample-with 75,000 firm-year observations-over a 30 years duration, 1976-2005.The analysis of correlation where done at five percent significant level. For other analyses they found an abrupt implicit taxes drop following 1986, pointing a structural change in the levels of implicit taxes after the enactment of TRA86. By applying an analysis that approximates the extent of implicit taxes, they found that before TRA86 enactment, firms lose all the tax preferences benefits to implicit taxes. However, following TRA86 enactment, business entities lose less to implicit taxes. The conclusion on this study was tax burden management has little effect on financial performance because it was seen as function of law than tax planning.

Kutz, Khan and Schmidt (2013) used the DuPont framework in ordinary regression analysis to identify the drivers of future profitability for a propensity score matched-sample of 67000 firms-years with various levels of tax avoidance. The variables of profit margin, asset efficiency and leverage on effective tax, interest and sales growth were under study. They found that the relationship between present and future earnings on effective taxes is lower for tax aggressive business entities compared to entities that are not tax aggressive; Tax aggressive entities' low future profitability mainly stems from the low operating margins and the lower margins often persist for about five years. Therefore tax burden management had no significant effect on performance at 0.1 significance level.

INTEREST BURDEN AND FINANCIAL PERFORMANCE

Guariglia, Spaliara and Tsoukas (2012) studied how interest burden affect firm survival in the United Kingdom of over 14,000 unquoted firms using cloglog model. Their findings were drawn from an entity-level data during the 2000 -2009 period. They deduced that there is a strong association between financing charges and an entity's survival. This association was very strong in the 2007-09 financial crises. They also differentiated firms into two categories: entities that are more likely to encounter financing challenges and those that are less likely to face financing setbacks and challenges, and established that survival odds of recent, non-exporting entities that rely on banks are grossly affected by interest payments. Interest burden in this study was found to be negative on financial performance using F-Test of equality.

Debrun and Kinda (2013) in their paper Squeezing Feeling: The Interest Burden and Public Debt Stabilization stated that considering colossal public debts that have been inherited, countries facing increasing costs of borrowing are

bound to legislate more aggressive fiscal consolidations than required by strict solvency distresses. The study was conducted in fifty six countries using a regression solvency test. Interest burden was a challenge to all advanced economies and sixty percent on the developing countries. The coefficient test of equality was used.

Nissim and Penman (2001) did an Empirical study on the impact of Interest Rates changes on Accounting Rates of Return, Equity Values and growth, and found that in the short term, both real and nominal rates are directly proportional to future profitability and growth. The study was on 50,000 firm-year observations. Hence, interest rates increments trigger higher profit margins and growth. However, the subsequent growth in earnings is usually not adequate to cover the increase in the required return that arises from the interest rate increment. Therefore overall impact on equity worth is negative, a finding that is similar to the observations deduced in the study for interest rates and stock returns.

Ramudu, Parasuraman and Nusrathunnisa (2012) study on What Drives Shareholders' Return? Evidence gathered from the Indian Steel industry after conducting a DuPont analysis of 342 companies on interest indicated that, conventionally, ROE decreases with increases in interest charges and vice-versa. Since the Sig. F exceeded 0.05 in every single year, the study concluded that entities' ROE in Indian steel industry were not driven by interest burden. Other variables in the study included tax burden, equity multiplier, sales margin and asset turnover and were shown to have an impact on financial performance.

OPERATIONAL EFFICIENCY AND FINANCIAL PERFORMANCE

Mulchandani and Mulchandani (2016) studied Impact of internal factors on profitability of selected two listed gold loan companies in India for five years. There was a significant negative correlation (-0.769 at one percent level of significance) between: Operating Efficiency (OE) and ROA. If Total Expenses / Total Revenue Ratio (OE) increase means total expenses are increasing and operating efficiency of the companies decreases, which ultimately deprived the profitability measure. In conclusion operating efficiency increased with expenses hence the negative correlation. Other key variables in the study included size, asset quality, capital and management efficiency which had significant impact on profitability.

Werner and Moormann (2009) in their paper Efficiency, size, markets share and Profitability of 61 European Banks – How Important Is Operational Efficiency? The researchers concluded that technical efficiency has become a major factor for financial performance of banks both in cross-sectional and panel regressions at ninety five percent confidence level. Notably, banks run with higher technical efficiency post more profits compared to their peers. Therefore, the enquiry whether efficiency was important for success in banking was correct.

Qudah (2011) studied Operating Efficiency and Market Value of Jordanian Privatized Firms: Fixed and Random Effects Analysis through the period 1992-2005.Other variables in the study included size, liquidity, strategic partners. The

variables GDP growth and openness of economy were measured at one percent level of significance. In particular, operating efficiency was evaluated using turnover ratio (fixed assets turnover), while performance was determined by use of market value ratio (share market price to share book value). Panel data analysis was used to establish the effect of privatization on entities' efficiency and performance. The outcome showed that privatization has a major positive impact on business operating efficiency as determined by fixed asset turnover and performance as determined by market value ratio.

Greene & Segal (2014) researched on Profitability and Efficiency in the U.S. Life Insurance Industry using stochastic frontier to estimate cost inefficiencies. They found that cost inefficiency in 136 business firms within the life insurance industry had a major impact on performance compared to earnings, and that inefficiency adversely affects profitability parameters like the return on equity. The study of cost inefficiency and organizational form was conducted at five percent significance. The cost inefficiencies were at fifty four percent.

ASSET UTILIZATION EFFICIENCY AND FINANCIAL PERFORMANCE

Warrad and Omari (2015) analysed the effect of turnover ratios on Jordanian Services Sectors' Performance of eight companies for 5 years and concluded there was no significant effect of total asset turnover on Jordanian services sectors' ROE at 5 percent significance level using ANOVA. Further there was no major effect of fixed asset turnover on Jordanian services sectors' ROE.

Xu (2011) studied Factors influencing Financial Performance of 28 firms listed at Shanghai Stock Exchange 50 (SSE 50) and concluded that total assets turnover ratio had a significantly beneficial effect on both ROA and ROE. He used multiple regression at five percent significance besides studying effects of liquidity and leverage.

Ani (2014) studied Effects of assets structure on the financial performance: evidence from Sultanate of Oman and concluded that in light of ROE, the asset's structure did not have a significant bearing on profitability. This implies that any alteration on the structure of assets would not occasion any ROA shifts. Further results revealed that ROE shifts are influenced by fixed assets while ROA is not. Other variables studied such as current assets had no effect on ROA and ROE at five percent significance level.

FINANCIAL LEVERAGE AND FINANCIAL PERFORMANCE

Tauseef, Lohano and Khan (2015) studied the impact of debt funding on corporate financial Performance: evidence from Textile firms in Pakistan and found that as the debt-to-asset ratio grows, at start the return on equity grows until an optimal debt amount is attained, after which it begins to decline. A non-linear relationship was observed from the 95 textile companies in the study where other factors such as sales growth and entity size were studied. The significance level used was five percent on the variable analysis. The optimal debt-to-asset ratio for textile firms in Pakistan was

approximated at fifty six percent. This outcome showed that the textile organizations with huge debts have to incur high interest costs, thereby leaving a small percentage of the net income for distribution to shareholders.

Khalid, Ali, Baloch & Ali (2012) Analysis of the Impact of Leverage on Various Measures of Corporate Performance of 374 non-financial companies for 10 years, using Arellano and Bond Dynamic Panel Data Estimation Technique found that whereas leverage and ROE bear an inversely proportional and significant relationship, high leverage compels the firm managers to perform optimally owing to the large interest burden and agency fee. Other variables studied included size of the companies. These other variables were determined to have significance too.

Gweyi and Karanja (2014) studied the impact of financial leverage on financial performance of 40 deposits taking savings and credit cooperative in Kenya and concluded that there is positive linkage between debt equity ratio with ROE and PAT at ninety nine percent confidence interval. A weak positive association between debt equity ratio on return on assets and income growth was arrived at.

RESEARCH GAP

Kutz et al (2013) concluded that effective tax planning doesn't translate to increased ROE. This is further explained by Jennings et al (2011) who contends that prior to TRA86 all tax savings were being consumed by implied taxes. They further proved that tax law reforms were the only force that can increase ROE. These results are contradicted by Constantin (2012) and Alloza (2013) who agree with the conventional norm that effective tax burden management can affect ROE positively.

Guariglia et al (2012) and Debrun and Kinda (2013) agree that survival of bank dependent firms is low because of interest burden. It is also confirmed to be the same for countries dependent on debt. Nissim and Penman (2001) in their studies content that interest burden rate changes increases the ROE in the short run but not enough to compensate the burden on the firm profitability in the long run. These studies are contradicted by Ramudu et al (2012) who concluded that interest burden did not affect the ROE of steel companies in India.

Werner and Moormann (2009) concluded that technical operating efficiencies was required to improve ROE. Their observations are affirmed by Qudah (2011) and Greene and Segal (2014) who agree operating efficiencies increases ROE. The contradictory study is from Mulchandani and Mulchandani (2016) who contends that operating efficiencies came with increased costs and affected ROE negatively.

Warrad and Omari (2015) and Ani (2014) studies indicate that total asset turnover has little significance on ROE but Xu (2011) concluded that Total asset turnover has a strong and significant link on financial performance.

Tauseef et al (2015) studies shows that increase in debt increases ROE up to a certain limit of fifty six percent after which the ROE starts declining. Khalid et al (2012) contents that interest burden makes managers perform optimally and therefore it negatives ROE. Patel (2014) contradicts the two by asserting the DFL is positive with ROE but not statistically

significant. Gweyi and Karanja (2014) observe that the correlation is positive and statistically significant.

Variable	Type	Operationalization	Measurement
Financial Performance	Dependent Variable	It is the process of measuring the results of a firm's policy prudence and operations in money terms	EAT/Equity
Tax burden	Independent Variable	Refers to tax incidence and deadweight costs as a result of tax	• EAT/EBT
Interest burden		Refers to finance cost as a result of debt usage in financing.	• EBT/EBIT
Operating efficiency		Refers to ability of the firm to manage operating costs and/or selling to maximize shareholders wealth.	• EBIT/Sales
Asset utilization efficiency		Refers to the potential of the business entity to use assets to generate income.	• Sales/Total Assets
Financial leverage		Refers to employment of debt in the capital structure.	• Total assets/Shareholders Equity

Source: Author, 2017

Table 2.1: Operationalization and Measurement of Variables

III. METHODOLOGY

The methodology of the study included the research plan and design, location of the study, empirical model, the population and sample sizes, the data collection process, the instrument to be used for gathering data and data analysis.

RESEARCH DESIGN

The study employed causal research design. A causal research was done with an aim to identifying the scope and nature of cause-and-effect relationship. It evaluates the effects of particular changes on prevailing norms and various processes. The researcher studied the impact of the modified DuPont factors on general corporate financial performance at the Nairobi securities exchange.

EMPIRICAL MODEL

Unbalanced panel data regression model was employed to describe the impact of modified DuPont identity on financial performance of non-financial entities in the stock exchange market. Unbalanced panel data regression model is appropriate for this research because it takes into consideration time series trend of performance and firm specific characteristics. The researcher used Hausmann tests to determine whether fixed effects model or random effects model are efficient for the study. The random effects models would be chosen if the error term is not correlated to the regressors within the entity and across entities while the fixed

effects model would be chosen if the error terms are correlated to regressors within the entity.

✓ FIXED EFFECTS MODEL

Fixed effects model without Moderating Variable
 $Y_{it} = \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \beta_4 X_{4,it} + \beta_5 X_{5,it} + e_{it}$

✓ RANDOM EFFECTS MODEL

Random effects model without Moderating Variable
 $Y_{it} = \beta_0 + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \beta_3 X_{3,it} + \beta_4 X_{4,it} + \beta_5 X_{5,it} + \mu_{it} + e_{it}$
 Where;

Y_{it} : Dependent variable, Return on Equity where i =entity and t =time

β_0 : Unknown intercept of each entity

$\beta_1 - \beta_6$: Regression coefficient for i^{th} independent variable ($i=1, 2,3,4,5$)

$X_{1,it}$: Tax burden ratio

$X_{2,it}$: Interest burden ratio

$X_{3,it}$:Sales Margin ratio

$X_{4,it}$: Asset turnover ratio

$X_{5,it}$: Equity multiplier/Financial Leverage.

e_{it} :Within-entity error term

μ_{it} :Between-entity error term

i :Number of firms under study

t :Time period(2011-2017)

TARGET POPULATION

The population of interest in this study consisted all non-financial companies listed in Nairobi securities exchange between years 2011-2017. The study did not include business firms from the financial sector because they are highly regulated by central bank as to capital holding, cash reserves and provision of bad debts besides their cash trading asset has unique levels because is a trading asset (Mwangi, Makau & Kosimbei, 2014). The years 2011-2017 were population of interest because there were recorded drop in Z-score of listed companies, reported profit warnings, delisting and suspensions. Again, data from published accounts was available

Year Item	2011	2012	2013	2014	2015	2016	2017
No. of Listed Companies	58	60	61	65	65	65	65
No. of Financial Institutions	17	18	19	19	19	19	19
No. of Non-Financial Companies	41	42	42	46	46	46	46

Source: NSE, 2017

Table 3.1: Population of the study

SAMPLING DESIGN

A census study of all listed Non-financial companies data from 2011-2017 was used to study the variables. Census study was appropriate because it improves the credibility of the data collected by incorporating certain information-rich cases for

study (Saunders, Lewis & Thornhill, 2009). The researcher purposely sampled non-financial firms to find out the impact of the variables on firm's performance because of financial performance activity drop in terms of the Altman Z-score, profit warnings and numerous suspensions and/or delistings (NSE, 2016)

DATA COLLECTION

The study employed secondary data relating to the 2011-2017 period on tax burden management as calculated from the audited financial statements of the listed Non-financial companies. The audited financial statements included the income statements, statements of financial position and any explanatory notes.

DATA COLLECTION PROCEDURES

The designed checklist was used to collect secondary data from audited statements by the researcher. The data was collected in a period of three weeks. Before the data is collected the checklist was checked for validity and reliability.

DATA ANALYSIS AND PRESENTATION

Unbalanced panel data models was applied to determine the direction and magnitude of the association between performance variables on the entity's financial Performance. Further, diagnostic tests were conducted to establish the appropriateness and reliability of resulting model.

IV. RESULTS OF THE STUDY

FIXED EFFECTS MODEL

This model would be appropriate when correlation error term are related to regressors within the entity.

FIXED EFFECTS MODEL WITHOUT MODERATING VARIABLE

The study sought to establish the effect of Tax burden, Interest burden, Operating efficiency, Asset utilization efficiency and financial leverage on Return on equity. The findings are stipulated in Table 4.1.

Variable	Estimate	Std.Error	t-value	Pr(> t)
Tax burden	0.128	0.074	3.739	0.043
Interest burden	-0.124	0.143	-0.869	0.386
Operating efficiency	-0.007	0.019	-0.391	0.696
Asset utilization efficiency	0.094	0.092	3.015	0.031
Financial leverage	-0.145	-3.855	-3.855	0.000
Total Sum of Squares: 1771.1 , Residual Sum of Squares: 1666.7				
R-Squared: 0.68928; Adj. R-Squared: 0.6381				
F-statistic: 3.86978 on 5 and 309 DF p-value: 0.002043				

a. Predictors: Tax burden, Interest burden, Operating efficiency, Total asset turnover and Financial leverage.

b. Dependent Variable: Financial Performance (ROE)
Source: Research Data, 2017

Table 4.1: Fixed Effect without Moderating Variable

Table 4.1 shows the parameter estimates of fixed effects model without moderating variable and indicates that the adjusted R² is 0.6381. This implies that 63.81% of variation in Return on equity is explained by tax burden, Asset utilization efficiency and Financial leverage in the model. This suggests that the model is suitable for prediction purpose. The results show that the overall model is statistically significant at 5% significance level (F_(5,309)=3.86978 and p-value=0.002043<5%). The predictive model is stated as shown below;

$$Y=0.128X_1+0.094X_4-0.145X_5$$

Where Y represented return on equity

X₁, represented Tax burden

X₄, represented Asset utilization efficiency

X₅, represented financial leverage

In addition, the study found that Tax burden was statistically significant in the model with a p-value of 0.043<5% significance level. This implied that for one unit change in Tax burden holding other variables constant, return on equity changes with a factor of 0.128 in the model. The hypothesis that tax burden has no effect on return on equity was not supported by this study.

RANDOM EFFECTS MODEL

This model is appropriate when correlation error term are not related to the regressors within and across the entities.

RANDOM EFFECTS MODEL WITHOUT MODERATING VARIABLE

The study sought to understand the effect of Tax burden, Interest burden, Operating efficiency, Asset utilization efficiency and financial leverage on return on equity. The findings are stipulated in Table 4.2.

Variable	Estimate	Std.Error	t-value	Pr(> t)
Intercept	1.087	0.223	4.863	0.000
Tax burden	0.119	0.074	3.626	0.011
Interest burden	-0.153	0.143	-1.069	0.286
Operating efficiency	-0.002	0.018	-0.094	0.925
Asset utilization efficiency	0.176	0.079	2.218	0.027
Financial leverage	-0.148	0.037	-3.962	0.000
Total Sum of Squares: 1847.7 , Residual Sum of Squares: 1727.3				
R-Squared: 0.65163; Adj. R-Squared: 0.50372				
F-statistic: 4.40539 on 5 and 316 DF p-value: 0.00068248				

a. Predictors: Tax burden, Interest burden, Operating efficiency, Total asset turnover and Financial leverage.

b. Dependent Variable: Financial Performance (ROE)
Source: Research Data, 2017

Table 4.2: Random Effects without Moderating Variable

Table 4.2 on parameter estimates of Random effect without Moderating variable results shows that the adjusted R² is 0.5037. This implies that 50.37% of variation in Return on equity is explained by tax burden, Asset utilization efficiency and Financial leverage in the model. This suggests that the model is suitable for prediction purpose. The results indicated that the overall model is statistically significant at 5% significance level ($F_{(5,316)} = 4.405$ and $p\text{-value} = 0.0006825 < 5\%$). The developed model became;

$$Y = 1.087 + 0.119X_1 + 0.176X_4 - 0.148X_5$$

Where Y represented return on equity

X₁, represented Tax burden

X₄, represented Asset utilization efficiency

X₅, represented Financial leverage.

In addition, the study found that Tax burden was statistically significant in the model with a p-value of 0.011 < 5% significance level. This implied for one unit change in Tax burden holding other variables constant, return on equity changes with a factor of 0.119 in the model. The hypothesis that tax burden has no significant effect on return on equity was not supported by this study.

HAUSSMANN TEST

The study sought to determine which of the two models between fixed effect and random effect is appropriate using Hausmann tests. The hypothesis were formulated as stated below;

H₀: Preferred model is random effect

H₁: preferred model is fixed effect model

The findings are stipulated in Table 4.11

Hausmann Test	
Statistic	Value
chi-square	2.4067
Df	5
p-value	0.7905

Source: Research Data, 2017

Table 4.3: Hausmann test; Fixed or Random

Table 4.3 shows that the results Hausmann test had a chi-square result of 2.4067 with p-value of 0.7905. Since the p-value is greater than 0.05, the hypothesis that preferred model is random effect was supported in the current study. In conclusion the random effect is the appropriate model to use for the researchers data since the p-value = 0.7905 > 0.05 significance level.

SUMMARY OF KEY FINDINGS AND DISCUSSIONS

The Hausman test indicated the suitable model for the data collected was the random effects model. This implied that the error terms are not correlated with the regressors. It can therefore be concluded that using the random effects model to explain the effect of the study independent variables on the dependent is appropriate.

In the case of random effects without moderating variable, the model explained the variations at 50.37%. Tax burden was statistically significant factor in explaining financial performance in the model at p-value of 0.011.

V. CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn.

It was concluded that tax burden management is an important force in corporate financial performance in the non-financial sector. This fact was supported by this study and other previous studies that indeed the cash savings from the tax burden management do affect the returns of a firm positively.

Secondly, interest burden management was not an important factor in financial performance of non-financial firms. This fact was indicated by this study which is a signal that the interest burden effect on the non-financial firms is insignificant.

Operating efficiency was equally not a weighty factor in corporate financial performance of these non-financial firms. Operating efficiency effect on the model can only be interpreted as insignificant.

Asset use efficiency was found to be a force in corporate financial performance. This findings support the fact that asset acquisition levels tailored to increase revenue can greatly increase financial performance of non-financial firms.

Financial leverage was also found to be an important factor in performance of non-financial firms. The use of more financial leverage affected the performance of the firms negatively.

RECOMMENDATIONS

Finance managers of non-financial firms should actively employ tax planning initiatives to ensure maximum benefits from tax burden management. Engaging in such activities will ensure tax savings hence more returns from investments made. Therefore it promotes achievement of shareholders wealth maximization goal by increasing return on equity.

Corporate and finance executives should maintain interest burden at optimum level to continue benefiting from tax shield otherwise it acts to reduce the return on equity at beyond optimum levels. However, interest burden management has no major statistical significance.

Corporate and finance executives of Non-financial firm's investment in operating efficiency should be kept at optimum level because it can be shown that it negatively affects return on equity in the current study. However, interest burden management has no major statistical significance.

Corporate and finance executives of Non-financial firms should actively engage in asset use efficiency to increase their returns on equity. Assets utilization efficiency have been shown in this study to improve the financial fortunes of a firm in a significant manner.

Corporate and finance executives of non-financial firms should reverse leverage level from the current level to an optimum level since it has been shown to be affecting the return on equity negatively and significantly.

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