

Effect of Operational Efficiency and Profitability on Market Value of Non-Financial Firms Listed in the NSE, Kenya

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Abstract:

Various factors of a firm can cause an increase or a decrease to firm value. Studies show the existence of capital structure, continuous profitability's, good operational efficiency, good dividend decision results to improved firm value while as the opposite deteriorates. Many of the problems experienced by the firms in the developing countries were mainly attributed to deteriorating market value of most firms. This situation has led to a loss of investors' wealth and confidence in the stock market. There have been attempts to conduct studies on the subject of determinants of market value. From the literature, it is visible that few researches have been done to establish the determinant of market value of firm with contradicting findings. Therefore, due to these inconsistencies, this study seeks to evaluate the determinants of market value of non-financial firms listed on NSE by adopting a panel data approach. Specifically, the study aims at examining the effect of operational efficiency and profitability on market value of non-financial firms listed in the NSE, Kenya. The target population comprised of 38 listed non-financial firms at NSE. The study used census sampling technique to select 38 non-financial listed firms. Secondary data sources were used. The study utilized secondary data collected between 2016 and 2020. Quantitative data was analyzed using descriptive and inferential statistics. Descriptive analysis summarized data in form of central tendency as well as dispersion and inferential analysis was used to test hypotheses. Descriptive analysis included Mean, maximum, minimum, Standard deviation while inferential analysis involved correlation analysis and multiple linear regression analysis specifically random effect with aid of STATA version. Hausman test was conducted to establish whether the study was used fixed or random effect regression. The study adopted fixed random effect which revealed that operational efficiency and profitability have significant positive effect on market value of non-financial listed firms at Nairobi Securities Exchange. Therefore, the study concluded that profitability and operational efficiency are significant determinants of market value. The study recommended that managers need to deploy efficiency-led strategies to enable them implement cost management approaches measured by the ratio of cost to income which will give rise to greater market value.

Key Word: Market Value Non-Financial Listed Firms, Nairobi Securities Exchange, Operational Efficiency, Profitability

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I. Introduction

The study of market value of corporation obtained considerable attention from the researchers as it had an attention in the literature of finance, the researchers agreed on maximizing the market value is the ultimate goal for the financial management that eclipsing the maximizing profit goal as a fundamental goal that corporations work to achieve Market value has a significant influence on the growth and development of the economy (Abdo, 2021) and the role of this influence is growing. In fact, the capital market has had a remarkable development over the last few decades and more and more companies are turning to it to obtain new risk capital and to diversify the overall risk. The process is also facilitated by the internationalization of capital procurement markets and by numerous innovations in negotiation techniques, as well as by the growing disintermediation of the banking system. The capitalization of a company is the product of the price of a share for the number of shares issued and listed. The sum of the capitalizations of companies listed on a market is equal to the value of the total capitalization of that financial market (Akinyi, 2020).

Market value is essential for every business, because it represents the brand image of a company and it determines how a company or a firm is viewed by the public. It can be likened to a market value or stock prices because it highlights to the investors the risk and future prospects of a company. When the firm value is rated highly it attracts a high number of shareholders which is closely followed by investors investing generously to

the company. It is therefore important for a company to increase its stock value to maximize shareholder's wealth (Chege, Wang & Suntu, 2020). On the other hand, if a company's image is distorted, the public slowly lose its trust and become hesitant trusting the company. This causes the investors to lose confidence in that business causing them to withdraw their funds or if they had not invested, they do not invest at all. Firm value can be measured using the price to book value (PBV) tool. Price to book value is the differentiation amid the price of the shares and the book value per share. The larger the price to book value of an enterprise the better the level of return of shares acquired by shareholders which meet the ideal goal of increasing the wealth of the shareholders.

According to the previous studies the market value are affected by fundamental elements represented in financial decisions which are the financing decision, investment decision, dividends decision and accounting profits, whereas the study of (Modigliani & Miller, 1963) is consider one of the studies that was proved through it that the market value affected by the financing and investing decisions and the corporation's value increases if it is funded throughout the debt and it is because of the paid interest on debt will reduce taxes paid on income, thus the disposable income for investors will increase compared with no taxes, and this study came after both (Modigliani & Miller 1958) introduced a study which dealt with searching in capital structure and its cost and the investment theory which found out that the corporation's value does not affected by the debt in capital structure, through assuming the existence of highly efficient markets, and no taxes on the corporation or personal taxes, and the data is available for everyone whether in corporations or individual investors, and also the interest in fixed regardless of the used debt ratio, and there are no prospects of bankruptcy.

A study by (Ater et. al, 2017) examined the mediating effects of firm growth on the relationship between capital structure and firm value among non-financial listed firms at the Nairobi Securities Exchange. The study used a target population of 36 non-financial firms at the NSE. A step wise regression analysis was used in testing of the hypothesis. The research findings pointed out that firm growth has a significant mediating effect and is a critical tool that can be used by management when doing capital structures adjustments to ensure efficiency and optimality as the firm grows.

Ouma and Timothy (2012) carried out a study to establish the dividend layout and firm performance among listed firms in the Nairobi Securities Exchange. Regression analysis was carried out to establish the relationship between dividend payout and firm performance. The findings indicated that dividend payout was a major factor affecting firm performance. Their relationship was also strong and positive. This therefore showed that dividend policy was relevant. It can be concluded, based on the findings of this research that dividend policy is relevant and that managers should devote adequate time in designing a dividend policy that will enhance firm performance and therefore shareholder value.

Ayako et.al, (2015), conducted a study that analyzed the factors affecting the performance of 41 non-financial companies listed on the Nairobi Securities Exchange (NSE) using panel data over the period 2003 to 2013. A Hausman test results suggested the application of a random effects model for ROA and a fixed effects model for ROE. The empirical results of the estimation of both ROA and ROE show that corporate governance was statistically significant in determining the performance of firms and it had the expected sign (Positive). The leverage of the firm also had the expected negative sign and was statistically significant in explaining the performance of companies. Firm size and liquidity were however found to be statistically insignificant in determining the performance of these firms. Consistent with previous studies, the study concluded that board size, board independence and liquidity are key determinants of a firm's financial performance. Consequently, the study recommends that a firm should ensure optimal board size, board independence (i.e increase the number of non-executive directors and sound liquidity management.

Statement of the Problem

Various factors of a firm can cause an increase or a decrease to firm value. Studies show the existence of capital structure, continuous profitability's, good operational efficiency, good dividend decision results to improved firm value while as the opposite deteriorates it (Dang, Nguyen & Tran, 2020). The core objective of a firm is not to only exist, but to maintain its operations through increasing its value, for it to meet the demands of the employees, the public and have an advantaged position in the market (Doorasamy, 2021). Many of the problems experienced by the firms in the developing countries were mainly attributed to deteriorating market value of most firms. This situation has led to a loss of investors' wealth and confidence in the stock market. There have been attempts to conduct studies on the subject of determinants of market value, Omukaga (2017) found that Debt to Equity ratio has a high correlation with Return on Equity and both Pre and After Tax Profits. As regards the effect of financial leverage on firms' share performance, the study established that the relationship between Debt Equity ratio and Earnings Per Share was low. However, Shower and Al-Ajlouni (2018) confirms that the stock prices of petrochemical companies listed in the Saudi Stock Market does not reflect the profit performance on the market price of the stocks. The affection trend on the profit performance is varied by different profitability measures. Abdo (2021) study showed that there is an impact of the dividend

policy on the market value of Jordanian commercial and Islamic banks listed on the ASE during the period 2008-2018. Wang and Lin (2014) indicated that commercial banks need to diversify to increase their market share when dealing with derivatives which are associated with higher risk. The Balk's Malmquist TFP index shows a decrease in bank productivity and improvement in pure technical efficiency. From the literature cited above, it is visible that few researches have been done to establish the determinant of market value of firm with contradicting findings. Therefore, this study aims to bridge gap by giving the appropriate information useful to explain the effect of determinants of firm value of on non-financial firms listed at NSE, Kenya. The study depended on previous studies with an objective to improve on them but also recommend other gaps that need further research. Therefore, due to these inconsistencies, this study seeks to evaluate the determinants of market value of non-financial firms listed on NSE by adopting a panel data approach.

Objectives of the Study

- i) To determine the effect of operational efficiency on market value of non-financial firms listed in the NSE, Kenya
- ii) To determine the effect of profitability on market value of non-financial firms listed in the NSE, Kenya.

Research Questions

- i. What is the effect of operational efficiency on market value of non-financial firms listed in the NSE, Kenya?
- ii. What is the effect of profitability on market value of non-financial firms listed in the NSE, Kenya?

II. Literature Review

Theoretical Framework

The study was guided by the following theories; stakeholder theory and Efficient Market Hypothesis

Efficient Markets Hypothesis

The origins of the Efficient Markets Hypothesis (EMH) can be traced back to the pioneering theoretical contribution of (Bachelier 1914). Market efficiency is one of the essential concepts in finance and involves three related concept, these are: Operational efficiency which is a measure of how well things function in terms of speed of execution and accuracy, informational efficiency which is a measure of how quickly and accurately the market reacts to new information and the efficient market hypothesis (EMH) which deals with informational efficiency. A market can be informationally efficient without being operationally or allocationally efficient. For instant, there can be imperfect competition in product markets (allocational inefficiency) with a monopolist dominating the market, and still have efficient capital markets, with the equity issued by the monopolist being rationally priced. Operational efficiency deals with the cost of transferring funds. It is a market condition that exists when participants can execute transactions and receive services at a price that fairly equates to the actual costs required to provide them. Economists use this term to describe the way resources are employed to facilitate the operation of the market. It is usually desirable that markets carry out their operations at as low a cost as possible. An operationally-efficient market allows investors to make transactions that move the market further toward the overall goal of prudent capital allocation, without being chiseled down by excessive frictional costs, which would reduce the risk/reward profile of the transaction (Bachelier 1914).

Stakeholder Theory

The term "stakeholder", first occurred in 1963 at an internal memorandum meeting at the Stanford Research Institute. It was used to oppose the idea that stockholders were the only group that the management would answer to (Pamar et al., 2010). Over the years scholars did a lot of research on this concept. For instance, Freeman in 1980s and 1990s studied this term to explain three concepts which include the problem of managerial mindset, the problem of ethics and capitalism and the problem of value creation and trade. Similarly, Harrison and Wicks (2013) ventured into studying the concept on stakeholder's theory in relation to firm value and firm performance. This theory states that the utility sought by stakeholders pertains more than economic value and that a firm that provides more returns to its stakeholders retains more support and participation from its stakeholders. Firms' operation should benefit the stakeholders. Capital resource should not only facilitate profit maximization for stakeholder's interest but overall increase of firm value (Salim and Yadav 2012). Stakeholders' theory is relevant to this study because it not only show the benefit of maximizing stakeholders but concentrating on value addition to the firm which in return benefits the stakeholders.

Conceptual Review

Conceptual framework is fundamental as it explains and incorporates methodological, philosophical, and pragmatic features of research thesis (Sykes & Piper, 2015). The conceptual framework below shows operational efficiency and profitability as independent variables while market value stock as dependent variable.

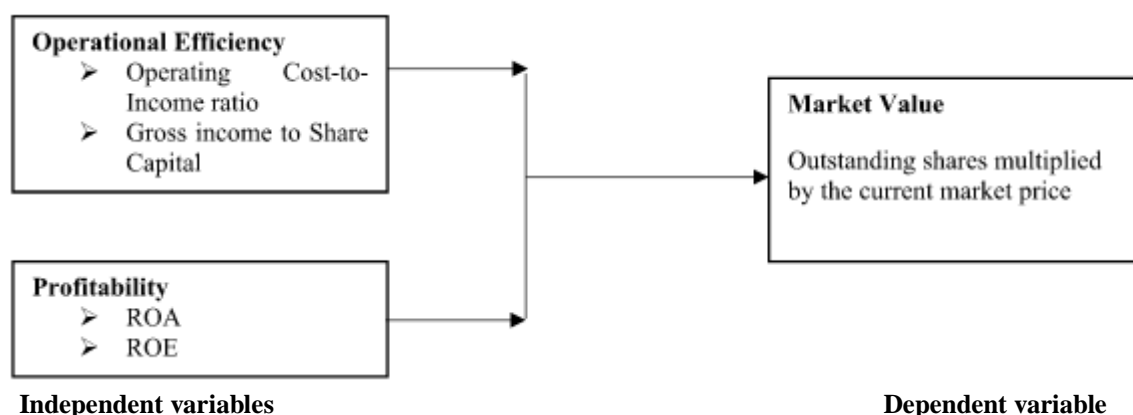


Figure 1.0: Conceptual Framework

Profitability or earnings capacity is the company's ability to generate profits in profitability reflects the profit from financial investments. Myers and Majluf (1984) found that financial managers use the pecking order theory with retained earnings as a first choice in the fulfillment of the funds and debt as a second choice as well as the issuance of shares as the third choice will always increase the profitability to increase profits. Profitability ratio is a ratio to measure the ability of the company makes a profit in relation to sales, total assets and own capital (Sartono, 2008). This ratio is considered by prospective investors and shareholders as it relates to the share price and dividends to be received. Profitability as a benchmark in determining the alternative financing, but a way to assess the profitability of a company are a diverse and highly dependent on income and assets or capital to be compared from the profits derived from company operation or net profit after tax with their own capital. With the variety of ways in the profitability of a company's research is not surprising that there are some companies that have a difference in determining an alternative to calculate profitability. It is not a requirement but the most important is the profitability of which will be used, the aim is solely as a tool to measure the efficiency of use of capital in the company concerned.

Operational efficiency is the capability of a business to deliver quality commodities to customers in the most cost-effective manner possible. The operating efficiency of a business in relation to the efficient utilization of the assets is reflected in net profit margin. Although a high return margin reflects better performance, a lower margin does not automatically indicate a lower rate of return on assets turnover. Relatively, more efficient firms tend to maintain more stability levels in terms of output and operating performance compared to their other industry peers (Mills and Schumann, 1985). Market value is the percentage increase or decrease in sum total of assets owned by a firm in comparison with the previous year. Market value is computed as a proportional change in a firm's estate in a certain year compared to the former year (Sutanto, 2019). The assets can either decrease or increase depending on various factors. This decrease or increase in market value has a direct impact on the firm value.

Empirical Review

Wang and Lin (2014), study the Impact of Bank Operational Efficiency Using a Three-Stage Data Environment Analytical Model. The authors use a three-stage sequential technique to develop a Data Envelopment Analysis (DEA) model for examining a bank's technical efficiency index. The results indicate that commercial banks need to diversify to increase their market share when dealing with derivatives which are associated with higher risk. The Balk's Malmquist TFP index shows a decrease in bank productivity and improvement in pure technical efficiency. Qiang et al., (2014), examine whether and how internal control over financial reporting affects firm operational efficiency. They find that operational efficiency, derived from the frontier analysis, is significantly lower among firms with material weaknesses in internal control relative to firms without such weaknesses. They document some evidence suggesting that effective internal control leads to greater operational efficiency through reducing the likelihood of misappropriation of corporate resources and through enhancing the quality of internal reports for decision making. The study also documents that smaller firms benefit more from having effective internal control in terms of operational efficiency.

Kijjambi (2014) established the factors responsible for financial performance of domestic commercial banks in Uganda. The factors are analyzed in the light of structure–conduct performance and Efficiency

hypothesizes. Using Linear multiple regression analysis over the period 2000-2011, the study found that, management efficiency; asset quality; interest income; capital adequacy and inflation are factors affecting the performance of domestic commercial banks in Uganda over the period of study. Omondi and Muturi (2013), aimed to find out the factors affecting the market value of listed companies at Nairobi Securities Exchange in Kenya. The study provides some 22 precursory evidences that leverage, operational efficiency, liquidity, company size and company age play an important role in improving company's financial performance.

Shawar and Al-Ajlouni (2018) explores the relationship between the profitability (measured by OI, ROE and NPR) and the stock market prices of the Petrochemical Industry Firms in Saudi Arabia during the period 2008-2015. The study confirms that the stock prices of petrochemical companies listed in the Saudi Stock Market does not reflect the profit performance on the market price of the stocks. The affection trend on the profit performance is varied by different profitability measures. Sudiyatno, Puspitasari, Nurhayati and Rijanti (2021) tested whether profitability acts as a moderating variable that is able to moderate the influence of the company growth and capital structure on the firm value. The results showed that company growth and profitability had a positive effect on the firm value, while capital structure had does not effect. The results of the analysis show that profitability does not moderate the effect of company growth and capital structure on the firm value, the interaction of company growth and capital structure with profitability has a negative impact on the firm value.

Pasukodewo and Susanti (2020) aimed to determine the influence of return on assets, return on equity, and net profit margin against stock valuation reflected with the price earnings ratio and its impact on the price to book value of retail trade companies listed on the Indonesia Stock Exchange period 2009-2018. The results found that a partial return on asset variable, return on equity, and net profit margin had a significant influence on the price earnings ratio, and the price earnings ratio also had a significant influence on price to book value. Reschiwati, Syahdina and Handayani (2020) aimed to examine and analyze the effect of liquidity, profitability, the size of the firm and its value in capital structure. The results of this study indicate that liquidity, profitability, and firm size significantly influence capital structure. Capital structure is not a mediator of the influence of liquidity and profitability on firm value, while the capital structure is a mediator of the effect of firm size on firm value.

III. Material And Methods

A cross-sectional correlational survey design was used for this study. Cross-sectional research is one which involves collecting data from a population at the same time. This design enables a researcher to observe two or more variables at the point in time and is also very useful in investigating a relationship between two variables. The design is again appropriate in this study as it is quick and easy to conduct since it involves a one-time effort over a short period using a sample from the population of interest (Lau & Kuziemy, 2016). For this study, the study targeted all the 38 listed non-financial companies at Nairobi Stock exchange (NSE) in the main segment. This study took entire population of the 38 listed non-financial firms using census technique. This study used secondary data. The data was drawn from past audited financial reports (Income Statement, Statement of Financial Position, and Cash Flow Statement) as they are published by the respective companies in CMA. The secondary data was retrieved from financial records of manufacturing companies listed at the NSE as published each year by NSE; the consideration period was between the financial years 2016 to 2020 (5 years period of time). Data was analyzed by regression panel data analysis tool. Data analysis included both descriptive and inferential statistics where model specification estimation and rationale of variables were done. Descriptive statistics included measure of central tendency; mean and measure of variability; standard deviation, maximum and minimum. These descriptive statistics was used to develop indices and measures to summarize the collected data (Kothari, 2007). The study used inferential statistics which are regression analysis and correlation analysis to test null hypotheses. These statistical tests were at 5% significance level. Secondary data was transformed into natural logarithm. The level of significance of 5% was used as a benchmark. If the P value is less than 0.05 at 5% significance level, reject the null hypotheses and accept the alternative and vice versa. Standard multiple regression model was used to measure the influence of financial risk on financial distress. This included fixed and random effects regression model as well as multiple linear regression models. Fixed and random effects regression model was used for individual financial risk measure while multiple linear regression for all financial risk measure as a block. All analyses were done using STATA 15.

IV. Result and Discussion

Descriptive Analysis

The descriptive statistics entailed Minimum, Maximum, Mean and standard deviation between 2016 and 2020. The results also showed overall descriptive statistics as obtained from panel data of said periods.

Table 1: Descriptive Statistics

Stats	Operational Efficiency	Profitability	Market Value
N	125	125	125
Minimum	-1.91298	-0.25681	2450000
Maximum	3.931977	0.464154	6.77E+14
Mean	0.500661	0.096062	2.24E+13
Std Dev.	0.742001	0.125774	1.07E+14

From Table 1, Operational efficiency which was measured using Operating Cost-to-Income ratio ranged from -1.912 to 0.464 with a mean of 0.500 and standard deviation of 0.742. Profitability was measured using return on equity which ranged from -0.256 to 0.464 with a mean of 0.096 and a standard deviation of 0.125. Lastly, market value which was measured by outstanding share multiplied by share priced ranged from 2,450,000 to 677,105,733,200 with a mean of 22,446,860,318 and standard deviation of 107,372,297,541.

Inferential Analysis

Unit Root Test

Unit root tests are tests for stationarity in a time series. A time series has stationarity if a shift in time doesn't cause a change in the shape of the distribution; unit roots are one cause for non-stationarity. A variable can only be said to be stationary when it has no unit root. The Dickey Fuller Test (sometimes called a Dickey Pantula test), which is based on linear regression. Serial correlation can be an issue, in which case the Augmented Dickey-Fuller (ADF) test can be used which is based on propositions

Ho: All panels contain unit roots

Ha: At least one panel is stationary

The results are indicated in Table 2.

Table 2: Unit Root Tests without Difference (Augmented Dickey-Fuller (ADF))

	Statistics	P-Value	Significant
Operational Efficiency	2.8468	0.0220	*
Profitability	8.9291	0.0000	**
Market Share	4.0997	0.0000	**

* sig at 5% level, ** sig at 1% level

Table 2 shows the summary results for Stationarity test. A p-value of more than 0.05 indicates the presence of unit roots (H0) while a p-value of less than 0.05 was an indication that there was no presence of unit roots for augmented Dickey-Fuller tests. The results indicated that there was absence of unit root for all the study variables.

Hausman Test (Choice of Model)

The study determined whether to run a fixed effects model or a random effects model when conducting panel data analysis. The results are indicated in Table 3.

Table 3: Hausman Test

	Coefficients ----			
	(b) fixed	(B) Random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Operational Efficiency	0.547065	0.148109	0.398956	0.00408
Profitability	0.459741	0.105219	0.354522	0.01282

b = consistent under Ho and Ha; obtained from xtreg

B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

$$\text{chi2}(5) = (b-B)[(V_b-V_B)^{-1}](b-B)$$

$$= 14.94$$

$$\text{Prob} > \text{chi2} = 0.0868$$

Interpreting the result from a Hausman test is fairly straightforward: if the p-value is small (less than 0.05), reject the null hypothesis. Results in the table 3 indicated a prob>chi2 value of 0.0868 which is greater than critical P value at 0.05 level of significance which implies that the null hypothesis that a fixed effect model is the best was not rejected. The study hence used a fixed effect regression model.

Correlation Analysis

To explore the effect of independent variables on market value, a correlation analysis was conducted at 95% confidence level. The results of the correlation are summarized in Table 4.

Table 4: Correlation Analysis

		Market value	Operational efficiency
Market value	Pearson Correlation	1	
	N	125	
Operational efficiency	Pearson Correlation	0.1989	1
	Sig. (2-tailed)	0.0473*	
Profitability	N	125	125
	Pearson Correlation	0.2122	0.9119
	Sig. (2-tailed)	0.034*	0
	N	125	125

* Significance at 5% and ** significance at 10%

The results indicated that operational efficiency has a positive and significant on the market value of non-financial listed firms at NSE($r = 0.1989$, $P = 0.0473$). This implied that increase in operational efficiency would result to increase in market value. The findings are in agreement with Omondi and Muturi (2013) who found out that operational efficiency affects the market value of listed companies at Nairobi Securities Exchange in Kenya Kirkwood and Nahm (2006) report that changes in firm efficiency are reflected in stock returns. Beccalli et al. (2006) also find that changes in efficiency are reflected in changes in stock prices and that the stocks of cost efficient banks tend to outperform their inefficient counterparts.

Profitability has a positive and significant effect on the market value of non-financial listed firms at NSE($r = 0.2122$, $P = 0.034$). This implied that increase in operational efficiency would result to increase in market value. These results are in agreement with Pasukodewo and Susanti (2020) who found that a partial return on asset variable, return on equity, and net profit margin had a significant influence on the price earnings ratio, and the price earnings ratio also had a significant influence on price to book value. Mule, Mukras and Nzioka (2015) indicated that there is a positive significant relationship between firm size and profitability, that is, return on equity implying that value that a unit change in firm size leads to an increase in return on equity of firms listed at the Nairobi Securities Exchange of 0.012, all things being fixed.

Multiple Linear Regression

The study sought to examine determinant of market value of non-financial firms listed at Nairobi Securities Exchange, Kenya. Both fixed and random effect model were fitted and the Table 5 below shows the model summary of the adopted fixed effect model. This model would be appropriate when correlation error term are related to regressors within the entity

Table 5: Regression Fixed Effect of Working Capital Components on Market value

Fixed-effects (within) regression		Number of obs =	125			
Group variable: FIR MID		Number of groups =	25			
R-sq:		Obs per group:				
within = 0.7819		min =	5			
between = 0.5051		avg =	5			
overall = 0.6435		max =	5			
corr(u_i, Xb) =	0.1769 (assumed)	F(2,103)=	10.88			
		Prob > F=	0.0000			
M Value	Coef.	Std. Err.	T	P>t	[95% Conf. Interval]	
Operational Efficiency	0.547065	0.068059	8.04	0.000	0.413113	0.681017
Profitability	0.459741	0.044592	10.31	0.000	0.371977	0.547506
_cons	0.611027	0.269679	2.27	0.023	0.082466	1.139588
sigma_u	0.864822					
sigma_e	0.616335					
Rho	0.663173	(fraction of variance due to u_i)				

Table 5 shows the parameter estimates of fixed effects model without moderating variable and indicates that the adjusted R^2 is 0.6435. This implies that 64.35% of variation in market value of non-financial listed firms at NSE is explained by operational efficiency and profitability in the model implying that 35.65% of the variance in market value is accounted for by other variables not captured in this model. The results show that the overall model is statistically significant at 5% significance level ($F(2,103) = 10.88$ and $p\text{-value} = 0.0000 < 5\%$). This suggests that the model is suitable for prediction purpose. The predictive model is stated as shown below; $\text{Market value} = 0.611027 + 0.547065X_1 + 0.459741X_2$

X₂ = Operational Efficiency

X₃ = Profitability

Effect of Operational Efficiency on Market Value

Operational efficiency was found to be statistically significant in the model at 5% significance level (t-value=8.04 and p-value=0.000<5%). This inferred that for one unit increase in operational efficiency holding other variables constant, market value increases by a factor 0.547 in the model. Therefore increase in cost to income ratio would result to significant increase in share price of listed non-financial firms at Nairobi Securities Exchange. Operating efficiency of firms has been considered a significant factor while valuations as operating activities and also considered as the core source of cash generation. Operating efficiency refers to the profitable, efficient and judicious use of resources (financial) available to an organization in perfect consonance with clearly laid-down financial policies relating to the operation. The findings are in agreement with Omondi and Muturi (2013) who found out that operational efficiency affects the market value of listed companies at Nairobi Securities Exchange in Kenya. Kirkwood and Nahm (2006) report that changes in firm efficiency are reflected in stock returns. Beccalli et al. (2006) also find that changes in efficiency are reflected in changes in stock prices and that the stocks of cost efficient banks tend to outperform their inefficient counterparts. Wang and Lin (2014) found that operational efficiency, derived from the frontier analysis, is significantly lower among firms with material weaknesses in internal control relative to firms without such weaknesses. They document some evidence suggesting that effective internal control leads to greater operational efficiency through reducing the likelihood of misappropriation of corporate resources and through enhancing the quality of internal reports for decision making.

Effect of Profitability on Market Value

The study sought to find out the effect of profitability on market value of non-financial listed firms at NSE. Profitability was found to be statistically significant in the model at 5% significance level (t-value=10.31 and p-value=0.000<5%). This inferred that for one unit increase in profitability holding other variables constant, market value increases by a factor 0.459741 in the model. In this regard increase in return on equity would result to significant increase in share price of listed non-financial firms at Nairobi Securities Exchange. Evidence supporting the prior study Kashinant and Kanahalli (2015); Kramer and Pushner (1997). However, the findings of our paper are not consistent with prior empirical studies by Stewart (1991). Shower and Al-Ajlouni (2018) confirmed that the stock prices of petrochemical companies listed in the Saudi Stock Market does not reflect the profit performance on the market price of the stocks. The affection trend on the profit performance is varied by different profitability measures. Sudiyatno, Puspitasari, Nurhayati and Rijanti (2021) showed that company growth and profitability had a positive effect on the firm value, while capital structure had no effect. The results of the analysis show that profitability does not moderate the effect of company growth and capital structure on the firm value, the interaction of company growth and capital structure with profitability has a negative impact on the firm value.

V. Conclusion and Recommendation

The study established that operational efficiency has significant positive effect on market value of non-financial firms listed at Nairobi Securities Exchange, Kenya. This postulated that an increase in operational efficiency would result to significant increase in market value. Therefore, the study concluded that listed non-financial firms are able to increase their market value if they are able to maintain operating cost above their net income. The study established that profitability has significant positive effect on market value of non-financial firms listed at Nairobi Securities Exchange, Kenya. This postulated that an increase in profitability would result to significant increase in market value. Hence, the study concluded that an increase in profitability of listed non-financial firms would enhance its market value.

Managers need to deploy efficiency-led strategies to enable them implement cost management approaches measured by the ratio of cost to income which will give rise to greater market value. The study recommends that managers should find ways of optimizing operational efficiency so as to ensure their income surpasses operating expenses. This can be done by managers lowering the proportion of operating fixed cost in relation to operating variable cost. This can be achieved by reducing the cost associated with fixed assets which attracts fixed operating cost monthly as well as investing in fixed assets which have high returns. The study also recommended that there is need for firms to increase their profitability so as to achieve increase in market value. This can be achieved by increasing the rate of return of equity. In this case, management is recommended to utilize their equity in a profitable manner so as to achieve increase in market value.

References

- [1]. Abdi, A. F. (2018). *The Effects of Internal Factors on Non-Financial Performance of Trucking Firms in Kenya: A Case of Dakawou Transport Ltd* (Doctoral dissertation, United States International University-Africa).
- [2]. Abdo, K. K. (2021). The Impact Of The Dividend Policy On The Market Value Of The Shares Of Public Shareholding Companies Listed On Amman Stock Exchange (2010-2019). *Journal of Management Information and Decision Sciences*, 24, 1-10.
- [3]. Adiputra, I. G. (2016). The effect of internal and external factors on the value of a firm through its investment opportunities on the stock exchange of the Southeast Asian Countries. *International Business Management*, 10(4), 370-376.
- [4]. Ahmeti, F., & Prenaj, B. (2015). A critical review of Modigliani and Miller's theorem of capital structure. *International Journal of Economics, Commerce and Management (IJEEM)*, 3(6).
- [5]. Akinyi, J. (2020). *Effect of Profitability on the value of manufacturing firms listed at the Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi).
- [6]. Alberca, P., & Parte, L. (2018). Operational efficiency evaluation of restaurant firms. *International Journal of Contemporary Hospitality Management*.
- [7]. Alhabsji, T., Rahayu, S. M., & Handayani, S. R. Effect of Growth, Liquidity, Business Risk and Asset Usage Activity, Toward Capital Structure, Financial Performance and Corporate Value (Study at Manufacturing Companies Listed in Indonesia Stock Exchange in 2010-2015).
- [8]. Antonacopoulou, E. P., & Meric, J. (2005). A critique of stake-holder theory: management science or a sophisticated ideology of control?. *Corporate Governance: The international journal of business in society*.
- [9]. Anyieni, A. (2013). The Role of Dividend decision in Business: A Kenyan Scenario. *International Journal of Professional Management ISSN*, 20422341.
- [10]. Asghar, M., Shah, S. Z. A., Hamid, K., & Suleman, M. T. (2011). Impact of dividend policy on stock price risk: Empirical evidence from equity market of Pakistan. *Far East Journal of Psychology and Business*, 4(1), 45-52.
- [11]. Ater, D. K., Kisaka, S. E., Iraya, C., & Mwangi, M. (2017). The Mediating Effect of Firm Growth on the Relationship between Capital Structures and Value of Nonfinancial Firms listed at the Nairobi Securities Exchange (NSE).
- [12]. Barzin, S., D'Costa, S., & Graham, D. J. (2018). A pseudo-panel approach to estimating dynamic effects of road dividend decision on firm performance in a developing country context. *Regional Science and Urban Economics*, 70, 20-34.
- [13]. Baum-Snow, N., Henderson, J. V., Turner, M., Brandt, L., & Zhang, Q. (2015). Transport dividend decision, urban growth and market access in China.
- [14]. Berzkalne, I., & Zelgalve, E. (2013). Innovation and company value: evidence from the Baltic countries. *Regional formation and development studies*, (3), 39-51.
- [15]. Bhullar, P. S. (2017). Empirical Analysis of Operating Efficiency and Firm Value: A Study of Fast Moving Consumer Goods and Pharmaceutical Sector in India. *International Journal of Economics and Financial Issues*, 7(3), 671.
- [16]. Bilafif, S. M., & Ibrahim, A. (2019). Effect of capital structure decisions on firm value of listed manufacturing firms in Mombasa County. *The Strategic Journal of Business & Change Management*, 6(2), 658-677.
- [17]. Boubaker, S., Rouatbi, W., & Saffar, W. (2017). The role of multiple large shareholders in the choice of debt source. *Financial Management*, 46(1), 241-274.
- [18]. Canh, N. T., Liem, N. T., Thu, P. A., & Khuong, N. V. (2019). The impact of innovation on the firm performance and corporate social responsibility of vietnamese manufacturing firms. *Sustainability*, 11(13), 3666.
- [19]. Chege, S. M., Wang, D., & Suntu, S. L. (2020). Impact of information technology innovation on firm performance in Kenya. *Information Technology for Development*, 26(2), 316-345.
- [20]. Cuong, N. T., & Canh, N. T. (2012). The effect of capital structure on firm value for Vietnam's seafood processing enterprises. *International Research Journal of Finance and Economics*, 89(89), 221-233.
- [21]. Dang, H. N., Nguyen, T. T. C., & Tran, D. M. (2020). The impact of earnings quality on firm value: The case of Vietnam. *The Journal of Asian Finance, Economics, and Business*, 7(3), 63-72.
- [22]. Dang, H. N., Vu, V. T. T., Ngo, X. T., & Hoang, H. T. V. (2019). Study the impact of growth, firm size, capital structure, and profitability on enterprise value: Evidence of enterprises in Vietnam. *Journal of Corporate Accounting & Finance*, 30(1), 144-160.
- [23]. Doorasamy, M. (2021). Capital Structure, Firm Value and Managerial ownership: evidence from east african countries.
- [24]. Gibbons, S., Lyytikäinen, T., Overman, G., and Sanchis-Guarner, R. (2019). New road dividend decision: the effects on firms. *Journal of Urban Economics*, 110, 35-50.
- [25]. Greene, W. H., & Segal, D. (2004). Profitability and efficiency in the US life insurance industry. *Journal of Productivity Analysis*, 21(3), 229-247.
- [26]. Griffin, R. (2021). *Fundamentals of management*. Cengage Learning.
- [27]. Harrison, J. S., & Wicks, A. C. (2013). Stakeholder theory, value, and firm performance. *Business ethics quarterly*, 97-124.
- [28]. Ibrahim, U. A., & Isiaka, A. (2020). Effect of Financial Leverage on Firm Value: Evidence From Selected Firms Quoted on the Nigerian Stock Exchange. *European Journal of Business and Management*, 12(3), 124-135.
- [29]. Jason, V. (2013). Defining profitability. *Library Technology Reports*, 49(7), 10-46.
- [30]. Javed, S. M., & Jahanzeb, A. (2012). A critical review of capital structure theories. *Information Management and Business Review*, 4(11), 553-557.
- [31]. Joensuu-Salo, S., Sorama, K., Viljamaa, A., & Varamäki, E. (2018). Firm performance among internationalized SMEs: The interplay of market orientation, marketing capability and digitalization. *Administrative sciences*, 8(3), 31.
- [32]. Kasper, E. (2015). *A Definition for Dividend decision-Characteristics and Their Impact on Firms Active in Dividend decision* (Doctoral dissertation, Technische Universität München).
- [33]. Kawiti, M. N. (2017). *The Effect of Internal Factors on Non-Financial Performance of Firms: A Case of DHL* (Doctoral dissertation, United States International University-Africa).
- [34]. Kevin, I., Sonny, N., Tigineh, M., & Sriram, V. (2017). Digital Kenya. An entrepreneurial revolution in the making. In N. Bitange & W. Tim (Eds.), *The Palgrave studies of entrepreneurship in Africa series* (pp. 1-518). London: Palgrave Macmillan.
- [35]. Kibet, T. W., Jagongo, A. O., & Ndede, F. W. S. (2016). Effects of dividend policy on share price of firms listed at the Nairobi Securities Exchange, Kenya. *Research journal of finance and accounting*, 7(8), 220-230.
- [36]. Lestari, E., Astuti, D., & Basir, M. (2020). The role of internal factors in determining the firm value in Indonesia. *Accounting*, 6(5), 665-670.
- [37]. Levi, S., & Segal, B. (2015). The impact of debt-equity reporting classifications on the firm's decision to issue hybrid securities. *European Accounting Review*, 24(4), 801-822.
- [38]. Lumapow, L. S., & Tumiwa, R. A. F. (2017). The effect of dividend policy, firm size, and productivity to the firm value. *Research Journal of Finance and Accounting*, 8(22), 20-24.

- [39]. Luo, X., & Xu, X. (2018). Dividend decision, value chains, and economic upgrades.
- [40]. Magnusson, T., & Enebrand, A. (2018). Dividend policy and its impact on firm valuation: A study of the relationship between dividend policy and stock prices on the Swedish market.
- [41]. Martini, N. N. G., Moeljadi, D., & Djazuli, A. (2014). Factors Affecting Firms Value of Indonesia Public Manufacturing Firms. *International Journal of Business and Management Invention*, 3(2), 35-44.
- [42]. Mitra, S., & Karathanasopoulos, A. (2019). Firm Value and the Impact of Operational Management. *Asia-Pacific Financial Markets*, 26(1), 61-85.
- [43]. Mubyarto, N. (2020). The Influence of Profitability on Firm Value using Capital Structure As The Mediator. *Jurnal Economica*, 16(2), 184-199.
- [44]. Mugo, A. N., Kahuthia, J., & Kinyua, G. (2019). Effects of dividend decision on growth of small and medium enterprises in Kenya: A case of clothing and textile businesses in Nairobi Central Business District. *International Academic Journal of Human Resource and Business Administration*, 3(6), 133-149.
- [45]. Mule, K. R., Mukras, M. S., & Nzioka, O. M. (2015). Corporate size, profitability and market value: An econometric panel analysis of listed firms in Kenya.
- [46]. Mwangi, L. W., Makau, S. M., & Kosimbei, G. (2014). Effects of Financing Decisions on Performance of Non-Financial Companies Listed in Nairobi Securities Exchange, Kenya. *Unpublished PhD Thesis, Kenyatta University, Kenya*.
- [47]. Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*.
- [48]. Olawale, L. S., & Ilo, B. M. (2018). The Effect of Dividend Policy on Stock Price in Nigeria. *Acta Universitatis Danubius. Economica*, 14(6).
- [49]. Ordu, M. M., Eneke, C. I., & Anyanwaokoro, M. (2014). Effect of dividend payment on the market price of shares: A study of quoted firms in Nigeria. *IOSR Journal of Economics and Finance*, 5(4), 49-62.
- [50]. Parmar, B. L., Freeman, R. E., Harrison, J. S., Wicks, A. C., Purnell, L., & De Colle, S. (2010). Stakeholder theory: The state of the art. *Academy of Management Annals*, 4(1), 403-445.
- [51]. Pasukodewo, T., & Susanti, N. (2020). The Impact of Profitability on Stock Valuation and Its Impact on Corporate Value. *International Journal of Finance & Banking Studies (2147-4486)*, 9(2), 46-55.
- [52]. Regoniel, P. A. (2015). Conceptual framework: A step by step guide on how to make one. *SimplyEducate. Me*.
- [53]. Reschiwati, R., Syahdina, A., & Handayani, S. (2020). Effect of Liquidity, Profitability, and Size of Companies on Firm Value. *Utopía y Praxis Latinoamericana*, 25(6), 325-332.
- [54]. Rosink, N. J. F. (2020). *The impact of capital structure on firm performance in Western Europe* (Master's thesis, University of Twente).
- [55]. Shaw, E., O'Loughlin, A., & McFadzean, E. (2005). Corporate entrepreneurship and innovation part 2: A role- and processbased approach. *European Journal of Innovation Management*, 8(4), 393-408. doi:10.1108/14601060510627786
- [56]. Shaver, M., & Al-Ajlouni, A. (2018). Impact of profitability on stock market value: Evidence from petrochemical industry in Saudi Arabia. *Journal of Administrative and Economic Sciences, Qassim University*, 11(2), 23-47.
- [57]. Shaver, M., & Al-Ajlouni, A. (2018). Impact of profitability on stock market value: Evidence from petrochemical industry in Saudi Arabia. *Journal of Administrative and Economic Sciences, Qassim University*, 11(2), 23-47.
- [58]. Sudiyatno, B., Puspitasari, E., Nurhayati, I., & Rijanti, T. (2021). The Relationship Between Profitability and Firm Value: Evidence From Manufacturing Industry in Indonesia. *International Journal of Financial Research*, 12(3), 466-476.
- [59]. Sutanto, H. (2019). The effect of firm size, firm growth, profitability and capital structure on firm value with dividend policy as intervening variables in telecommunication companies listed on Indonesia stock exchange. *International Journal of Public Budgeting, Accounting and Finance*, 2(4), 1-13.
- [60]. Ülengin, F., Önsel, S., Aktas, E., Kabak, Ö., & Özyayın, Ö. (2014). A decision support methodology to enhance the competitiveness of the Turkish automotive industry. *European Journal of Operational Research*, 234(3), 789-801.
- [61]. Wan, G., & Zhang, Y. (2018). The direct and indirect effects of dividend decision on firm productivity: Evidence from Chinese manufacturing. *China Economic Review*, 49, 143-153.
- [62]. Wang, X., Li, D., O'Brien, C., & Li, Y. (2010). A production planning model to reduce risk and improve operations management. *International Journal of Production Economics*, 124(2), 463-474.
- [63]. Zhang, Y., Khan, U., Lee, S., & Salik, M. (2019). The influence of management innovation and profitability on organization performance: a mediating role of sustainability. *Sustainability*, 11(2), 495.
- [64]. Zhu, Q., Zou, F., & Zhang, P. (2018). The role of innovation for performance improvement through corporate social responsibility practices among small and medium-sized suppliers in China. *Corporate Social Responsibility and Environmental Management*, (August), 1-10. doi:10.1002/csr.1686

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