RETAINED EARNINGS AND PROFITABILITY OF MANUFACTURING FIRMS LISTED AT NAIROBI SECURITIES EXCHANGE

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ABSTRACT

This study sought to assess the influence of retained earnings on profitability of manufacturing firms listed at the Nairobi Securities Exchange. The study was guided by the following specific objective: finding out the influence of retained earnings on profitability of manufacturing firms listed at the Nairobi Securities Exchange. The study was guided by Pecking Order Theory. The study adopted descriptive research design. The study targeted 8 listed manufacturing firms at the NSE. The sample size was 8 listed manufacturing firms listed at the Nairobi Securities Exchange. Secondary data was collected for duration of 5 years (January 2016 to December 2020) annually. Descriptive and inferential statistics were analyzed using STATA 15. Descriptive statistics entailed central tendency (means) and dispersion (standard deviation). Inferential statistics such as regression and correlation analyses were also used to determine both the nature and the strength of the relationship between the dependent and independent variables. Analyzed data was presented using tables and graphs. The findings revealed that, retained earnings have significant positive effect on profitability of manufacturing firms listed at the Nairobi Securities Exchange. This implied that increase in the utilization of retained earnings in the capital structure would results to significant increase in profitability. The study recommended that it would be prudent to recommend that manufacturing firms listed at the Nairobi Securities Exchange adopt the use of retained earnings as a source of finance in most of their operations as compared to other sources of funds so as to maintain the positive relationship between retained earnings and financial performance. The study further recommended that the manufacturing firms listed at the Nairobi Securities Exchange should embrace retained earnings as sources of finance for new projects in emerging markets.

Key words: *Retained Earnings, Capital Structure, Profitability*

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INTRODUCTION

Liberalization and globalization of economic policies around the world have led to an expanded investment opportunity. According to Singh and Bagga (2019), finance options have become wider and thus increase in dependence on capital markets. Financial managers are therefore charged with the responsibility of making sound financial decisions which largely involve raising funds for the company. According to Kontuš (2021), the major focus of any company is to maximize on profit while minimizing on cost of capital. As such, the main goal of any strategic manager is to work on identifying capital structure which can only be obtained when debt and equity combine to reduce the cost of capital and work towards maximizing profitability of the firm.

According to the Cappa, Cetrini, and Oriani (2020), optimal capital structure remains to be a great challenge that many theatricians are still struggling to solve. The substantial scholar and managerial attention witnessed over the years has since led to mixed and inconclusive results. Even though there is no universal understanding of optimal capital, a study on Italian listed firms found that integration and internationalization, individually, have a negative relationship to firm's debt ratio. The same study by Cappa, Cetrini, and Oriani (2020) found that diversification is positively related to firm's debt ratio. The findings of the study helps in providing clearer understanding of the effect of corporate strategy on retained earnings in the capital structure. Kontuš (2021) also studied agency costs, capital structure and corporate performance using listed companies in Croatia, Slovenia, and Czech Republic. The author found that capital structure decisions have effect on agency costs of listed companies which then affects corporate performance of companies in Croatia, Slovenia, and the Czech Republic.

A study on effects of retained earnings on Profitability of Listed Firms in Ghana was conducted by Musah (2018) and the author found no conclusive evidence on what optimal capital mean. A regression analysis used to investigate the relationship between retained earnings and profitability showed found a positive relationship between profitability. The great interest in then capital structure has been evidenced in Kenya based on the increased studies on the relationship between capital structure and profitability. According to Mutua and Atheru (2020), retained earnings has become an area of great interest in developed countries compared to developing countries. In this descriptive research whose target population comprised of all then eight companies that are listed under manufacturing and allied sector in Nairobi Security Exchange (NSE), it was found that retained earnings and equity have negative influence on profitability of firms studied. In another study by Meshack, Winnie, Okiro, and Ochieng (2022), the findings showed that capital structure had a positive statistically significant effect on profitability, hence the creation of the gap of study.

Financial and strategic managers are expected to make a choice on the right balance between debt and equity based on multiple factors such as prevailing market circumstances like changes in share prices. Both equity and debt are important for both short-term and long-term for the company. For instance, when the company is facing income shortages it is important to consider using equity financing which is inclusive of retained earnings as it is relatively cheaper compared to debt. In order to remain competitive in the present world, firms are working hard to ensure that they attain an optimal capital structure as it determines how successful the company will be when it comes to funding of the processes and development.

Statement of the Problem

The world has become so competitive and this calls for every firm to work developing and sustaining a competitive advantage to remain relevant in the market. The competition is not only happening in foreign countries but also here in Kenya where over the years the country has seen hostile takeovers, mergers, and acquisitions while other government

corporations being bailed out. Singh & Bagga (2019) argue that the most complex issue that finance managers are facing is how to know the effect of retained earnings on the profitability of a firm. Retained earnings has become an area of great interest yet faces intense debate on whether it results in profitability of the firm. According to the work of Modigliani and miller (1958), the authors argued that optimal capital structure does not exist which therefore means capital structure decisions have no value to a firm. This finding has led to multiple studies being conducted to determine whether retained earnings has a relationship with profitability of firms. In a country like Kenya where many youths are suffering from unemployment, firms are expected to remain profitable and grow into larger companies to create more employackment. Mutua and Atheru (2020) had no support for the relationship of retained earnings and profitability but Meshack, Winnie,Okiro and Ochieng (2022) had supported there existed a relationship between retained earnings variable and profitability, hence the raising of the gap for the study. This study therefore sought to find out whether there is a significant relationship between the retained earnings and profitability.

Objective of the Study

This study's objective was to find out the influence of retained earnings on profitability of manufacturing firms listed at the Nairobi Securities Exchange. The study was guided by the following research questions;

- How does retained earnings influence on profitability of manufacturing firms listed at the Nairobi Securities Exchange?

Modigliani and Miller (MM) Proposition

Through a seminal article written by Modigliani and Miller in 1958, capital structure of a firm is irrelevant when it comes to determination of its value (Modigliani & Miller, 1958). The two studied capital structure theory in great depth and found that capital structure is irrelevant proposition. That capital structure a firm employs in financing their operations is not relevant. According to Modigliani and Miller, the market value of any company is based on its earning power and the risk of its underlying assets and not the choice of its financing strategies. The assumptions arebecause a perfect market has no transactional cost, no bankruptcy costs, no taxes, no agency cost, and that lending is based on a risk-free rate (Harris &Raviv, 1991). As such, increased in profitability of a firm can be best achieved when a firm lowers its average costs of capital as the cost of equity is considered higher than the cost of debt. However, we are living in a world characterized by tax deductible interest payments which means firm's value and capital structure are positively related Modigliani and Miller (1963).

This theory of Modigliani-Miller is broadly accepted as it is the origin of the capital structure theory. When based on the perfect capital market, the value of the firm is seen to be independent of the capital structure and in that case equity and debt become a perfect substitute for each other (Ardalan, 2017). Since the perfect capital market is not easily attainable, it is important for any firm to make a choice of capital structure as it is crucial in value determining factor. It is from this theory that other capitalstructure theories were developed alongside their empirical analysis. According to Brigham and Gapenski (1996), this theory of Modigliani and Miller is valid but only in practice because bankruptcy costs exist, and they were directly proportional to the level of debt of the firm. It is possible to make conclusion that there is a dire t relationship between capital structures and financial performs of a firm based on this conclusion.

Pecking Order Theory

According to pecking order theory, the central focus is the asymmetric information and transaction costs. Managers are seen to understand firm's prospects, risks, and value than does outside investors (Agyei, Sun, &Abrokwah, 2020). Since the shareholders do not have the same knowledge, the asymmetric information has significant effect on the way internal and external financing is decided between issue of

equity or debt. It is for this reason that a pecking order is needed when making decisionin how to finance a new project.

Based on the asymmetric information debt is preferred over equity because the board consider it a confidence that investment is profitable. On the other hand,Shareholders and investors consider issuance of equity as lack of confidence in the new project whether it will be profitable, and the share price is seen as being overpriced (Yıldırım&Çelik, 2021). The effect becomes a drop in the share price,and it mostly happens in non-high-tech industries.

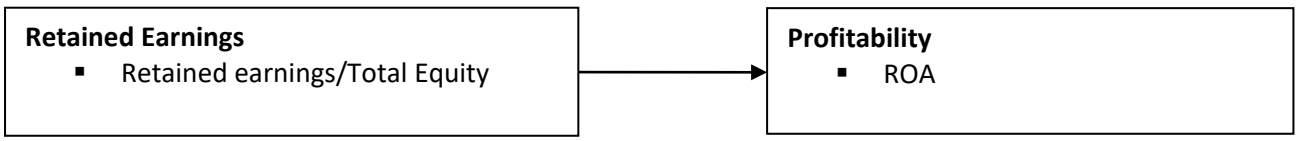
According to Pecking order theory, firms have a given preference order for capital being used to finance businesses and it reflects order of capital issued to finance project. As such, firms are expected to rank internal sources of finance before ranking external sources. This theory is found to fail in places where it is mostly needed and that is in small companies where information asymmetry is considered valuable.

Since managers have more information than the shareholders, managers can benefit from the full knowledge information asymmetry and go for debts without shareholders knowing. The theory only recommends that borrowing be done when internal cash flow is not adequate to fund capital expenditure (Zeidan, Galil, &Shapir, 2018). In that case, it would be wrong for managers to consider issuing equity. Based on the ranking, it is important to exploit internal financing before considering any form of external funds because internal funds have no flotation costs, and no additional disclosure of information is needed and thus no possible loss of company value and competitiveness. In the event the company must go for an external borrowing, then there is a specific order that must be followed. The order f financing sources are debt, convertibles securities, preferred stock, and lastly common stock.

Firms are known to avoid going for equity and risky securities due to information asymmetry because they are sensitive to miss-pricing and adverse selection. However, this theory does not help in predicting an optimal capital structure as the argument is that retained earnings will be used first to meet the capital needs and that debt is only used as a second choice in case of deficit (Zeidan, Galil, &Shapir, 2018). As such, more profitable firms are expected to rely more on the retained earnings to grow their finances while less profitable firms use more debt financing.

Pecking order is however believed to have some limitations as it ignores the effect of agency costs, taxes, financial distress, and the investment opportunities available to a company on the actual capital structure of a firm. According to Ahmadimousaabad, Bajuri, Jahanzeb, Karami, and Rehman (2013), the theory is also silent on issues such as when managers decide to accumulate financial slack that can result to being immune to market discipline as the focus is put on equity funds as the primary source of financing. Consequently, this theory cannot be used independently and thus the need for other complementing theories to arrive at an objective conclusion on the relationship between capital structure and profitability of firms.

Conceptual Framework



Independent Variable **Dependent Variable**

Figure 1: Conceptual Framework

Source: author

Review of the study variable

A company's retained earnings is its long-term financial strategy with regards to deciding how much earnings to pay out as against retaining them for investment in the company. It leads to division of profits between dividend payment to shareholders and reinvestment in the company. There are no transaction and bankruptcy costs associated with retained profits (Altman, 1993). Thus, retained earnings constitute a major source of finance for companies. Investors prefer capital gains over dividends, because capital gain taxes can be deferred into the future and are taxed at a minimum rate while taxes on dividends must be paid as on as they are received and are taxed at a relatively higher rate. Whenever there is an increase in personal income tax of the shareholders, companies tend to retain and reinvest more of their earnings. Payment of earnings as dividend is associated with agency cost and an opportunity for existing shareholders is lost to reinvest their earnings for growth of the company. William Droms (1990) says that investors benefit more from reinvested earnings than dividends in the long-run. As ensured by Oscar Harkavy (1953), Plough back of corporate profits gives rise to appreciation in the value of corporate securities.

Earnings retained are the most important sources of financing growth of a firm. The level of internal funds conveys information about growth prospects of companies (Gilchrist and Himmelberg, 1995). Growth firms pay lower dividends, reinvest more of their earnings, and provide a greater percentage of their total returns in the form of capital gains. Companies with a few major investment opportunities would limit paying out a larger percentage of their earnings. For this reason, higher dividends are paid in stable, low-growth industries. By contrast, high-growth companies with lots of investment opportunities are likely to pay low dividends because they have profitable uses for the capital. So, growth is likely to place a greater demand on internally generated funds. Higher growth firms use less debt (Rajan and Zingales, 1995). This is because conflicts of interest between debt and equity holders. Myers (1977) also argues that firms with growth potential would have less capital structure. Growth opportunities can produce moral hazard effects and push firms to take more risk. In order to mitigate this problem, growth opportunities should be financed with equity or retained earnings instead of debt. It has been predominantly supported by the empirical studies that internally generated funds have enormously contributed to financing growth of corporations in recent times

METHODOLOGY

Research Design: A research design is the plan for selecting the sources and types of information to be used to answer the research question (Creswell & Clark, 2017). Descriptive research design was adopted. This research design was most appropriate since the objective of the study was establishing the influence of retained earnings on profitability of manufacturing firms listed at the Nairobi Securities Exchange.

Target Population: According to Cooper and Schindler, (2008), population shows the analysis of entire units or group or total elements considered for the study on which general inferences were made. The total eight (8) listed manufacturing firms in Kenya were considered as the target population as well as the sample size of the study and financial data was analyzed for a period of 5 years (Between 2016 to 2020) making a total of 40 observations.

Sample Size and Sampling Technique: According to Collins and Hussey, (2006) they argued that sampling technique is an elementary selections method from the population that will stand on behalf of that population. On the other hand Hyers, (2017) argued that there are factors which determine a particular sampling technique that is nature, object and scope of the study for cases of sample random type or various types. This study took the entire population of the 8 listed manufacturing firms at NSE using census technique.

Data Collection Instruments: The data collection was used by researchers as optimal technique to

obtain the relevant data for purpose of analysis. The data is merely about all information needed by researcher to obtain accurate findings and soundly possible observations (Mugenda & Mugenda, 1999). This study used secondary data. The data was drawn from past audited financial reports (Income Statement, Statement of Financial performance, and Cash Flow Statement) as they are published by the respective manufacturing firms. They were used for calculation to discover the quantifiable manner changes. The secondary data was retrieved from financial records of manufacturing firms; consideration period was between the financial years 2016 to 2020 (5 years period of time). The income statements and balance sheets tools were used for data mining guided by secondary data collection schedule.

Data Collection Procedure: Secondary data was collected from manufacturing firms from 2017-2021 where financial statements was used. The data was drawn from past audited financial reports (Income Statement, Statement of Financial performance, and Cash Flow Statement) as they are published by the respective manufacturing firms' websites. Additional data was also obtained from Capital Market Authority websites. The income statements and balance sheets tools were used for data mining guided by secondary data collection. Ratios were computed and used during analysis as indicated in Table 1.

Table 1: Operationalization and Measurement of Study Variables

Variable	Name of Variable	Operationalization	Measurement
Dependent variables	Profitability	Return on Asset (ROA)	Net profit after tax/ total assets
Independent variable	Retained earnings	Retained Earnings to Total Equity ratio	Retained Earnings/Total Equity

Data Analysis and Presentation: Descriptive statistics was used to analyse qualitative data and presentation done in tables and figures. STATA 15 was used for data analysis. The data analysis was used as a research technique for the systematic, objective, and qualitative description of content manifestation of a communication (Cooperu & Schindler, 2011). 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).

Correlation analysis is the statistical tool that was used to determine the strength of relationship of two variables (Levin & Rubin, 2008). The study conducted a correlation analysis to establish the strength of the relationship between the independent and the dependent variable. Correlation analysis helped to detect any chance of multicollinearity. Correlation value of 0 shows that there is no relationship between the dependent and the independent variables. On the other hand, a correlation of ±1.0 means there is a perfect positive or negative relationship (Hair *et al.,* 2010). The values were interpreted between 0 (no relationship) and 1.0 (perfect relationship). The relationship was considered small when $r = \pm 0.1$ to ±0.29, while the relationship was considered medium when $r = \pm 0.3$ to ±0.49, and when $r = \pm 0.5$ and above, the relationship was considered strong.

Multiple regressions analysis was done to establish the influence of retained earnings on profitability of manufacturing firms listed at the Nairobi Securities Exchange. Data was presented using tables, and figures to make them reader friendly. In addition, a multiple regression was used to measure the quantitative data and was analyzed using STATA too. The regression equation is:

$Y = \beta_0 + \beta_4 X_4 + \varepsilon$

Where

Y is the profitability,
β_0 is the regression constant,
β_4 are the coefficients of independent variable,
X_4 is Retained earnings.
ε is error term

RESULTS

Descriptive Statistics

Table 2 below is a representation of descriptive statistics and distribution of variables as considered for this study: retained earnings on profitability. The descriptive statistics considered were mean, maximum, minimum, standard deviation, skewness and kurtosis. Mean is a measure of central tendency, a calculated 'central' value of a set of numbers. Standard deviation shows just how spread-out numbers are. A large standard deviation can be an indicator of just how poor estimators of population mean the sample mean is. Skewness measures asymmetry of a statistical distribution and refers to the extent to which a distribution differs from a normal distribution. Kurtosis on the other hand measures whether data are heavy-tailed or light-tailed with reference to a normal distribution. The results are shown in Table 2.

Table 2: Descriptive Statistics

Stats	ROA	Retained Earnings
N	40	40
Min	0.009332	0.000176
Max	0.10152	0.587278
Mean	0.038092	0.238465
Std Dev.	0.023288	0.176543
Skewness	0.675022	0.176308
Kurtosis	2.48304	1.750556

Observing overall statistics as obtained from panel data from 2016 to 2020, financial (proxied as ROA) ranged from 0.009 to 0.10152 with a mean of 0.0381. The distribution had a standard deviation of 0.0232. The trend analysis within five years is as shown in Figure 2 in which there was high variability in 2016.

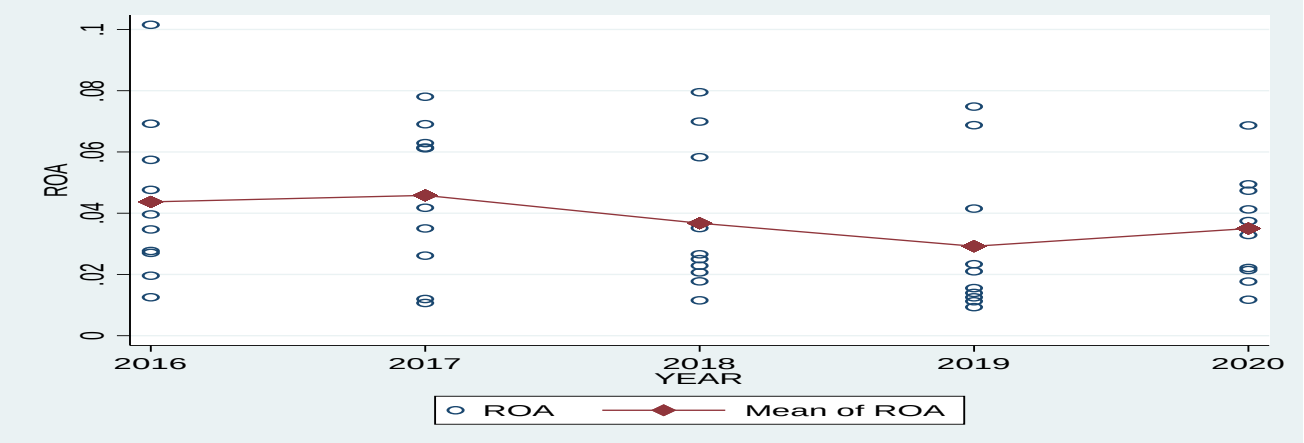


Figure 2: Trend Analysis for Return on Assets

During study period, 2016-2020, retained earnings ranged from 0.000176 to 0.5827 with a mean of 0.238 and standard deviation of 0.176543. The Figure 2 shows virtual presentation of returned earning between 2016 and 2020 for manufacturing firms listed at the Nairobi Securities Exchange. There was high variability in the profitability of manufacturing firms listed at the Nairobi Securities Exchange as indicated in Figure 3.

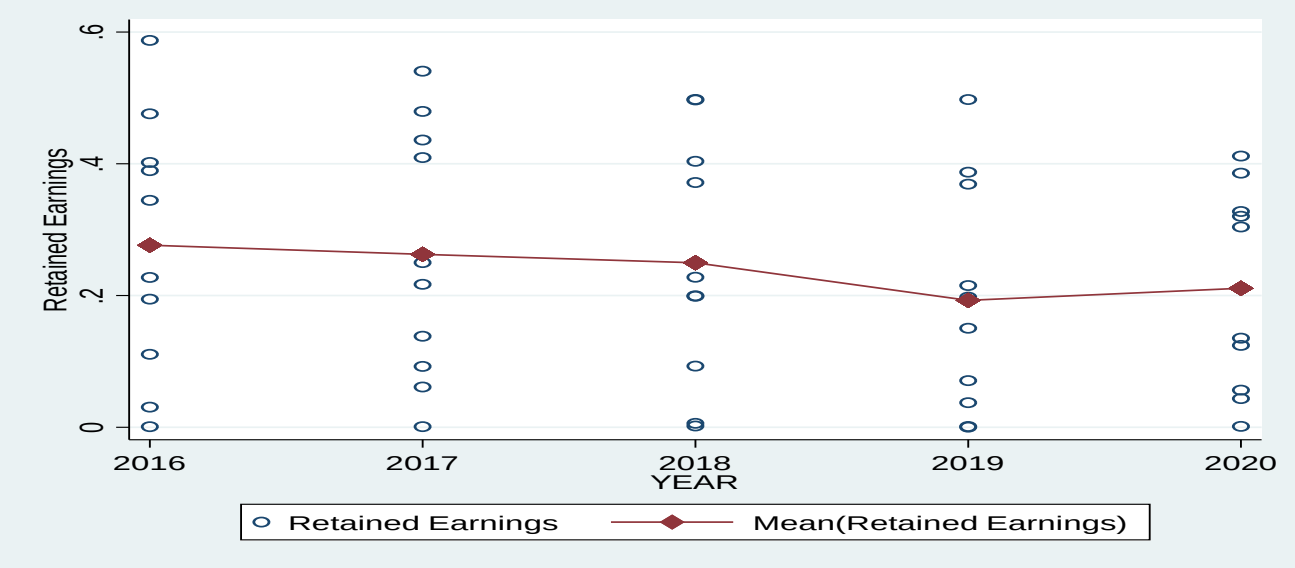


Figure 3: Trend Analysis for Retained Earnings

Pearson Correlation Analysis

Correlation analysis provides a value that shows whether changes in the dependent variable are caused by changes in the independent variable. The correlation coefficient then measures the linear association between two variables (Crossman 2013). Correlation coefficients are numerical values indicating the direction of and strength of a relationship between two variables. If equal to 1, there is a strong and positive relationship; if 0, there is no relationship; and if -1, there is a strong, negative relationship.

Table 3: Pearson Correlation Analysis

		Retained Earnings
Retained Earnings	Pearson Correlation	1
	Sig. (2-tailed)	
	N	40
ROA	Pearson Correlation	0.6023
	Sig. (2-tailed)	0.0000**
	N	40

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 3 presented the findings of Pearson correlation between firms at Nairobi Securities Exchange. Similarly, a correlation coefficient of 0.6023** implied that there is significant positive relationship between retained earnings and profitability. Therefore, increase in retained earnings would results to increase in profitability of listed manufacturing firms at Nairobi Securities Exchange. The correlation analysis outcomes are consistent with the finding of a research study by Muthui et al. (2017) who located that retained revenues had positive and significant impact on the monetary efficiency of commercial banks in Kenya.

Linear Regression

Fixed effect model was estimated between retained earnings and profitability (Return on Asset). Panel regression was conducted to determine whether there was a significant effect of retained earnings on profitability. Table 4 presents the regression model

on retained earnings with return on Asset as a measure of profitability.

The study regression model was as below

ROA=-2.26575+0.117824X_4

Where ROA is the profitability,

X_4 is Retained earnings.

- **How does retained earnings influence on profitability of manufacturing firms listed at the Nairobi Securities Exchange?**

The study established that retained earnings had a regression co-efficient (β_2) of 0.117824 p=0.000 implying that when retained earnings are controlled, a unit increase in retained earnings among listed manufacturing firms at Nairobi Securities Exchange in Kenya would result to significant increase of 0.117824 units in profitability. The results are not in agreement with Mbuvi and Gekara (2015) who investigated the influence of retained earnings on shareholder value creation of listed companies in Kenya. Findings of the study indicated a positive and significant relationship between retained earnings and value creation of shareholders of firms listed in the Nairobi Securities Exchange in Kenya. Boujjat and Rachid (2016) investigated the relationship that existed between retained earnings and firm performance of Morocco's listed firms. Finding of the study indicated a positive and significant relationship between retained earnings and firm performance. Ofori-Sasu, Abor and Osei (2017) examined the effect of retained earnings on profitability on firms listed at the country's securities market. Results from the study indicated a positive and significant relationship between retained earnings and shareholders value. Kariuki, Jagongo and Muniu (2019) sought to find out if any relationship existed between retained earnings and shareholders value creation of quoted firms in Kenya. Results from the study indicated a positive and statistically significant relationship between retained earnings and shareholder value creation.

CONCLUSIONS AND RECOMMENDATIONS

The objective of the study was to establish how retained earnings influences profitability of listed manufacturing firms at Nairobi Securities Exchange. Descriptive statistics indicated that from 2016 to 2020. Panel data Pearson correlation results revealed a significant positive relationship between retained earnings and profitability of listed manufacturing firms at Nairobi Securities Exchange. Fixed effect linear regression analysis revealed that retained earnings significantly accounts for variation in profitability of listed manufacturing firms at Nairobi Securities Exchange.

The objective of the study was to establish how retained earnings influences profitability of listed manufacturing firms at Nairobi Securities Exchange. From the linear and multiple regression results, the study concluded that retained earnings has significant negative effect on profitability of listed manufacturing firms at Nairobi Securities Exchange. An increase in retained earnings would results to significant increase in profitability of listed manufacturing firms at Nairobi Securities Exchange. Therefore, retained earnings are a significant influencer of profitability of listed manufacturing firms at Nairobi Securities Exchange. It is also evident from the findings that share capital financing seem to be the preferred choice by majority of firms. Firms are therefore at liberty to raise capital through equities since they have marginal negative impact on returns. In addition, the general preference of external equity over retained earnings and debt clearly negates the provision of the pecking order theory implying that it may not be applicable in practice.

Based on the findings, the study has established that earnings retention has a positive and significant effect on profitability manufacturing firms listed at the Nairobi Securities Exchange. To this end, the study recommends that it is necessary to retain part of the earnings to finance new investment capable of generating more wealth and having positive contributions to the shareholders. Also, corporate

managers should endeavour to make judicious and efficient use of earnings to increase investor returns and that firms should retain when there are investment opportunities with a positive net present value (NPV). This requires that the managers should carry a succinct analysis of the available projects to ensure maximum returns are attained by investing in the most appropriate projects. To the investors, the study recommends that they should monitor and ensure that undistributed profit/earnings are judiciously used to create value in return. Also, they should invest in organizations which use retained earnings to finance investment opportunity and create value.

Suggestion for Further Studies

The research focused on the impact of retained earnings on the profitability of manufacturing firms listed at the Nairobi Securities Exchange, Kenya. In this particular instance, the investigation concentrated on retained profits, and share capital, short- and long-term debt. Firstly, it is acknowledged that the study suffers from a selection bias and that there may be many other explanatory variables that have not been incorporated into the models used. Therefore, further studies should explore retained earnings constructs on profitability of listed manufacturing firms at Nairobi Securities Exchange in Kenya.

The study was limited to large manufacturing firms listed at the Nairobi Securities Exchange, implying that other manufacturing firms not listed at Nairobi securities Exchange were excluded. In this regard, the study recommended that further study should focus on all manufacturing firms in Kenya so as to compare the effect of retained earnings on listed and non-listed manufacturing firms at Nairobi Securities Exchange holistically.

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