THE EFEFCT OF PROFITABILITY ON DIVIDEND POLICY FOR MANUFACTURING COMPANIED LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DEDICATION

I declare that this project is my original work and has never been submitted to any university for examination.

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This research project has been submitted for examination with my approval as the university supervisor

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ACKNOWLEDGEMENT

DEDICATION

To my spouse Beatrice, our beloved children Sharon, Fiona and Ignatius.

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LIST OF ABBREVIATIONS

BIHH   - Bird in the Hand Hypothesis

GDP   - Gross Domestic Product

EPS   - Earnings per Share

NSE   - Nairobi Securities Exchange

PER   - Price Earnings Ratio

R & D   - Research and Development

ROA   - Return on Assets

ROE   - Return on Equity

SCP   - Structure-Conduct-Performance

ABSTRACT

The aim of the study was to investigate the effect of profitability on dividend policy of manufacturing firms listed in NSE. The purpose of the research was to investigate the association between profitability as measured by ROA and dividend policy of the manufacturing firms. Descriptive research design was used in the study and secondary data from the audited financial reports of the manufacturing firms form 2011-2015 were heavily relied on. The study conducted a census of all the firms listed at the NSE. Data collection sheets were used as tools to gather the data and prepare it for data analysis. The data analysis was performed by use of MS Excel and SPSS then presented using tables. From the data analysis, the coefficient of determination was 0.7240. This implies that the predictor variables could explain 72.40% of the adopted study model. Profitability regression coefficient was +0.301. Liquidity had a positive coefficient of 0.012. Earnings have a negative coefficient of -0.053. Firm size had a regression coefficient of +0.39. The p-value for profitability as indicated was 0.02 and the p-value earnings was 0.029 which were <0.05. This implies that profitability and earnings were statistically significant at 5% significance level. Liquidity and firm size have a p-value of 0.791 and 0.63 respectively. Conversely this implies that liquidity and firm size were not statistically significant at 95% confidence level. The table shows that the F-test is 3.282 and the probability is 0.112. The significance is more than 0.05. This means that the there was no statistical significance of the independent variables combined. This also indicates that the null hypothesis should be accepted hence there is no effect of a firm's profitability on the dividend policy adopted. The results of the correlation analysis indicated that dividend policy is positively correlated with profitability as shown by the correlation coefficient of 0.4263. The results also provide negative correlation coefficients for liquidity, earnings and firm size. This reveals that the dividend policy will increase when the liquidity, earnings and size of the firm declines. The strongest predictor of dividend policy established in the study was profitability with a coefficient of +0.426. This means that when profitability increases, the company's ability of profit distribution in form of dividends also increases. The study recommends adequate measures to be put into place to improve and grow the profitability of the firms. Profitability growth can be achieved through efficiency measurement of the manufacturing plants. A good way to do this is by calculating how efficiently the plants are converting raw materials into finished products for both the plant as a whole and for individual products. This allows the management to compare themselves with others in the same sector and zero in on strong and weak performers in the product mix. The study also recommends the formation and implementation of a manufacturing commission by the government in addition to the Kenya Association of Manufacturer. The commission will offer industrial sustainability and will involve the politicians in setting up and running the commission. It will also engage in driving new thinking around industrial policy in Kenya. Similar research can be conducted to cover an extended period of more than five years. The study recommends a future research to be conducted using a combination of both macro and microeconomic variables.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Dividend policy is interestingly one of the most debated concepts in corporate finance. Numerous empirical studies have been done with researchers presenting various theories on the same. Despite the empirical studies carried out on dividend policy more still needs to be done as many issues have not been addressed (Brealey and Myers, 2005). Dividend payout is crucial to existing and potential investors as dividends will predict the financial health of the company (Gill, Biger & Tibrewala, 2010). Lintner (1956) identified that the current and previous year dividend earnings can be used as a basis for predicting the payment pattern for the corporation.

The primary aim of a company is to grow and maximize the shareholders wealth besides profit motive (Pandey, 2015). The profitability of a firm determines what dividend policy is going to be adopted. The dividend policy determines the share of earnings to be given to be shareholders by dividend and retained profits to be ploughed to business (Arumba, 2014). Payment of dividends by firms is a key indicator of financial strength, future stability and growth potential. However it is recommended that a company establishes and sticks to its dividend policy.

1.1.1 Profitability

The primary objective of business enterprises is profitability. Firms that that are not making profit are deemed to fail in the long run. Without profitability a firm will not survive in the long run. Profitability is an important parameter in financial forecasting as it is based current and past performance (Hostrand, 2009). According to Malik

(2011), the profitability of a firm is the state or condition of yielding a financial profit or gain.

Firms that operate effectively and efficiently can enjoy economies of scale which may lead to lower production costs conversely to inefficient firms. In the Demsetz model, better performance can be for a certain period of time, this can be due to firm's goodwill, corporate structures and diversification of resources. Jovanovic (1982) noted that it is only competent enterprises that will firms endure in the market as they grow their market share.

According to Malik (2011), the profitability of a firm depends on its net interest margin, financial leverage and its non-portfolio incomes. The commonly used ratios in evaluation of a firm's profitability and financial performance are Price earnings ratio, ROA and ROE. To investigate the financial health of a firm, profitability ratios are utilized. The ratios look at how profits were earned akin to sales, assets and net worth.

1.1.2 Dividend Policy

Pandey (2015) postulated that a company's dividend payment decisions are important in the financial management. The crucial dividend strategy is to define how much earnings are supposed to be issued as dividend payments and how much to be treated as retained earnings. Further, a firm will grow its wealth by significantly utilizing its retained earnings effectively. From the shareholder's point of view, dividends are desired because they increase shareholder's return on their investments.

The important aspect in their study, Ethel, Mary and Inyiama (2015) promoted the signalling theory of dividend policy. In defining the term dividend policy, they argue that dividend policy can be viewed as the firm's shareholder distribution of its profits on a pro rata basis. This is determined by the shares each shareholder has in the firm. The company directors during the annual general meeting declare the proposed dividends. This is an indication of the firm's health and capability of sustenance and improvement upon present financial performance at short and the long run.

According to Gill, Biger and Tibrewala (2010), proper management of dividend strategies affect the share prices and the wealth of the shareholders in a firm. Rustagi (2003) argues has the view that the establishment of a specific dividend policy is beneficial to the company and the shareholders. Further to this view, are guidelines and regulations firms establish and implement as means towards dividend payments to the shareholders.

Basically, there are four types of dividend policies. Regular dividend policy allows investors to get dividends regularly from a company at the usual rate. The policy is applicable if a company has regular pattern of earnings annually. In the stable dividend policy, shareholders are paid certain regular amount. This can take the form of a constant dividend per share where a reserve fund is generated to make fixed payments when there are insufficient company earnings in a year. The other form is the constant payout ratio whereby constant percentage of company earning is made annually (Fama & French, 2001).

The third form is the stable dividend plus policy where low dividend per share constantly plus an extra dividend is made in the year of high profitability. A firm can also adopt the irregular dividend policy where regular dividend payment is not made to the shareholders. This can be caused by uncertain earnings on the company, poor liquidity or as a result of many successful projects implemented by the company. The last dividend policy is the no dividend policy where the firm does not make any dividend payments to its shareholders. This policy can be adopted if the firm requires funds to steer its growth or working capital to boost its investments (Fama & French, 2001).

1.1.3 Profitability and Dividend Policy

According to McCabe (2011), the profitability of a company is the most essential and reliable indicator of financial performance. Profitability provides a broad indication that a firm has the ability to raise its income level. Companies with consistent high profit levels tend to pay high dividends to the shareholders. This can explain why higher profitability persistence is witnessed in larger companies because they are more flexible to changes than the small sized firms in similar markets.

Friend and Puckett (2004) purported that high dividend ratios are not always a good strategy to adopt by firms. They recommend reinvestment of the earnings not paid as dividends for it helps the company to grow its future earnings. High ratios may also imply that the company lacks enough funds to make new projects investments which affect the future profitability of the firms. The use of dividend policy ratios should seek to strike a balance between short term cash flow and growth in the firm's future

earnings. The theoretical expectation of a firm's profitability is that it is supposed to have an impact to the firm's dividend policy in place.

1.1.4 Manufacturing Firms Listed at the NSE

Manufacturing is an important sector that is growing substantially in Kenya. It is influencing the economic development of the country. Its potential to generate the foreign exchange earnings through the exports has led to the growth of the GDP, currently 14%, and provision of employment. The manufacturing sector retains a great potential for growth and investments.

The manufacturing segment of the firms listed at the NSE comprises of 10 firms. These companies include; BOC Kenya, British American Tobacco, EA Breweries Ltd, Unga Group, Kenya Orchards, Flame Tree Holdings Ltd, A. Bauman Company Ltd, Eveready EA Ltd, Mumias Sugar and Carbacid Investments.

1.2 Research Problem

In developing countries, the dividend policy adopted by firms differs with the policies adopted by companies in the developed countries. Dividend policy studies have become valid for listed companies in Africa due to the growth of investments in the continent (Claudio & Urs, 2010). Implementation of dividend policy strategies has become a challenge for directors and managers responsible for the financial control in firms. This is due to the different view of investors pertaining to present cash dividends and future gains of capital nature. Company managers and investors need to understand the effect of profitability on the dividend policy in order to make optimal investment decisions.

The manufacturing sector has a potential of growth and a vision 2030 flagship to provide employment and achieve economic growth. Being a developing market, little or no financial literature exists to provide a road map to these investors as to what to expect. The manufacturing sector has witnessed gradual growth in contributing to the country's Gross Domestic Product (GDP) which currently stands at 14% as projected in the vision 2030. This sector still has high potential for growth and investment.

On a global perspective, Musiega et al. (2013) argued that dividend policy has not attained a universal acceptance despite its analysis by many researchers over several decades. In their study, Chay and Suh (2008) concluded that different countries exist amidst unique regulatory environment and dividend policy regulations. Their findings may not apply across all markets. There have been differences in opinion among researchers on what exactly determines dividend policy.

Dividend policy adopted by firms in Kenya has been diverse hence there has not been a notable similarity of the dividend policy chosen by same industry operating companies. The impact of profitability is not yet resolved by researchers in Kenya. Whereas the aim of any investor or shareholder is to maximize his/her wealth, the choice of the firm to invest in becomes paramount with investors being keen on the best firms to put their hard earned money. Shareholders chase the firms that record high profits; as witnessed in Safaricom IPO where many Kenyan investors rushed to purchase the shares gauging their analysis on the high profits announced by Safaricom. Although the age of the firm did not matter much the profitability did not turn out to bring much return to the shareholders as the company dividend is relatively low (Mundati, 2012). In Kenya investors have mixed opinion and they choose both the older and younger firms in preference to the ones that are most favourable to their

investment portfolio with some investors opting to invest in virtual firms (Njiru, 2007). The current study sought to answer the question: does profitability affect the dividend policy of listed manufacturing companies at the Nairobi Securities Exchange.

1.3 Research Objective

The objective of this research was to explore the relationship between profitability and dividend policy of listed manufacturing firms in Kenya.

1.4 Value of the Study

Findings of this research provide an evaluation for theory and empirical evidence on the dividend strategies adopted by manufacturing firms and other studied companies in Kenya.

The study also will be of value to investors and potential investors for it will provide an understanding of the dividend policy concept. The investors will be able to make their investment decisions relying on correct empirically tested information.

The study will contribute towards the existing empirical evidence and open more opportunities to other researchers in this field of finance.

The study findings will also provide insight to all the managers of firms on the best strategy of dividend to choose depending on the profitability and where the firm lies in the business life cycle so as to meet the needs and expectations of investors.

To the firms that look forward to mergers and acquisitions, this study will help them evaluate and analyze the factors that would lead them to choice of a dividend policy. Also upcoming firms will find this study useful to give them a guide on how to handle dividend policy issues so as to meet their strategies and remain competitive.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews various theories relating to dividend policy and the empirical literature advance by other researchers in relation to dividend policy of firms. The chapter subsections look at the dividend policy in view of profitability to as to identify the gaps and try to answer the puzzle in relation to manufacturing firms listed at the NSE.

2.2 Theoretical Review

2.2.1 Dividend Irrelevant Theory

This theory was advanced by Modigliani and Miller in 1961. According to the, the value of the firm does not depend on its dividend policy. They also argued that the value of the firm is only determined by its level of business risk and its earnings power. Prior to this theory, Graham and Dodd (1934) claimed that the single aim of the existence of firms is to pay dividends. Further, firms that make high dividend payments must make high priced share sales. Modigliani and Miller argued that despite the pattern of income distribution that a firm uses, its value is determined by the basic earning power and investment decisions.

In view of the theory, dividends paid out do not determine the firm's value hence irrelevant as regards the firm valuation. In theory, a shareholder has the ability to construct his own dividend strategy. Modigliani and Miller (1961) further argue that if a shareholder in need of a 5% dividend can create it by selling 5% of his shareholding in the event that the company fails to pay dividends. The shareholder can also use an extra dividend received to purchase additional shares if the firm pays higher dividends

than expected. This purchase and sale of the shares does not include any brokerage costs hence the firm's dividend policy is irrelevant.

2.2.2 Tax Preference Theory

According to Brigham and Ehrhardt (2011), tax preference theory state that shareholders of a firm prefer capital gains to payment of dividends. Capital gains preference is as a result of the impact of taxes on capital gains compared to the effect of taxes on the dividends. However, in some jurisdictions investors have to pay taxes on dividends and capital gains. The taxes paid on dividends are lower than the taxes paid on capital gains.

According to Pandey (2015), for tax purposes, dividends have a treatment as ordinary income and capital gains have a special treatment. In many jurisdictions, capital gain tax rate is usually lower as compared to ordinary income tax. Taxation policy encourages shareholders' preference to capital gains over dividend payments. Capital gains tax is payable only when shares are sold. These favourable tax differentials in proceeds from capital gains results in shareholder tax savings.

2.2.3 Liquidity Preference Theory

Liquidity preference refers to demand for money. Liquidity preference concept was developed by Keynes in 1936 to explain how interest rates are determined by the money supply and demand. Keynes (1936) argued that interest rates cannot be used to reward savings because hoarding the money by a person will only make him refrain from consuming his current income and forego the interest. Instead, interest should be treated as a reward for parting with liquidity but not as a reward for saving. The

quicker and asset can be converted to cash, the more liquid it is said to be because liquidity is an attribute to an asset.

2.2.4 Dividend Preference Theory

Also referred to as Bird in Hand, the theory was developed by Myron Gordon and John Litner as a counter theory to M&M dividend irrelevance theory. According to this theory, investors seek stocks with high dividend payments consequently demanding high market prices. The investors, when behaving rationally, are risk averse and will prefer near dividends for future dividends (Pandey, 2015).

Krishman (1933) put forth the initial argument in relation to the bird-in-hand theory. He gave an illustration of two stocks with identical earning records and prospects with stock paying a high dividend. He postulated that the stock paying high dividend will command a higher price merely because stockholders prefer present to future values.

2.2.5 Marginal Productivity Theory of Profit

This theory states that the profits in a firm equal the marginal profitability of the entrepreneur. This marginal productivity can only be evaluated in the case of industry where there are several firms and several entrepreneurs. Hence it cannot be measured in the case of a firm. This hypothesis postulates that the profitability of a firm will depend on the marginal production. Further, the theory states that the greater the marginal production, the greater the profitability of a firm in an industry (Dornbush & Fischer, 1978).

2.3 Determinants of Dividend Policy

2.3.1 Profitability

Profitability means the condition of a company which leads to financial gain. According to Chung-Hua (2012), companies tend to raise their dividend payments more profitable. Further, the profitability of the firm determines its stability in net earnings. Pruitt and Gitman (1991) argue that the history of a firm's profitability influences its dividend payments. In a study done by Baker and Gandi (2007), higher profits results to greater firm investments through retained earnings and consequently lower dividend payout.

2.3.2 Leverage

Rozeff (1982) defined leverage as the extent at which a firm is financed by debt. He further states that a highly levered company possesses large fixed payments for the external financing which substitutes the payment of dividends. In contrast, the higher the rate of earnings' retention, the lower the level of external financing. A firm which is highly levered is expected to be stronger in its equity base. These firms have more debt and interest obligations to meet. Waswa (2013) argued that highly levered firms pay low dividends because they are being monitored by the creditors who reduce the management's capability to pay dividends.

2.3.3 State of the Capital Market

If a firm is assured of raising funds through the capital market, it should consider adopting high dividend payout ratios. It will not be necessary to retain earnings hence high dividends will be issued to the shareholders. On the other hand, capital markets

which are unfavorable cannot be relied upon by the firms in raising funds to finance new investment projects. This forces the management of the firms to adopt a conservative dividend payout policy. This means that the firm will retain its earnings and issue low dividends to its shareholders.

2.3.4 Earnings

The earnings of a firm to its after tax net income. Earnings indicate whether a firm will sustain payment of dividends in the long term. According to Goaied (2006), firms with high profitability and more earnings will manage large cash flows hence they will be able to pay high dividends. Further, firms with quick growth distribute high dividends as a means of attracting investors hence improving the management's confidence to the shareholders. This means that even with declining earnings managers will be hesitant to reduce dividends when the earnings drop because doing so will send bad signals to the investors.

2.3.5 Level of Liquidity

Liquidity refers to the ability of a firm to meet short term obligations as and when they fall due. Cash is an important element in the liquidity position of the company. When a company does not have enough cash to meet its short term obligations, the management may hold the issuance of dividends to ensure that the retained funds are available when need arises (James, 2009). The management of a company is required to evaluate the effect of making dividend payments on the company's liquidity position. If the effect is adverse, then the management should retain the earnings rather than paying out dividends.

2.4 Empirical Studies

Dividend policy is an area where extensive research has been conducted for a long time. Lintner (1956) conducted an empirical study on 28 firms in USA. The study found out that dividend payout was independently determined from the investment decisions of a company. Using regression analysis, he found out that firms gradually modified payment of dividends towards desired payout ratios according to increase in earnings.

Black and Scholes (1974) investigated 25 portfolios of the New York Stock Exchange from 1931 to 1966. They sought to test the impact dividend yield and dividend policy had on common stock and the return of the firms. They concluded that it was difficult to determine the effect of dividend policy and dividend yield on common stock and yield.

Kevin (1992) conducted an empirical study to analyze the factors that determine the dividend decision and payment behavior of 650 Indian companies from 1983 to 1984. The study found out that the profitability and earnings of the firm are the most important indicators in dividend determination. The study concluded that companies strive to achieve a stable dividend rate.

A study done by Pandey (2001) to investigate the corporate dividend payout behavior of firms listed in Kuala Lumpur Stock Exchange from 1993 to 2000 found out that the firms exhibit unstable dividend payout pattern with high adjustments in dividend payments to meet the target payout ratio. The study used a sample of 6 industries which were categorized in order to examine the variations in payout ratio.

 Fama and Babiak (1968) studied the determinants of dividend payments by individual firms from 1946 to 1964. Regression analysis, simulation analysis and

prediction techniques were used to analyze dividends and earnings of the firms. The study concluded that the earnings of the firm significantly influenced the dividend policy of a firm.

In a study to establish the impact dividend policy has on the value of a firm for firms listed at the NSE, Bitok (2004) found out that there was a significant association between dividend payout ratios and the value of the firm. The study sampled all the firms listed at the NSE from 1998 to 2003. The study also utilized regression analysis and trend analysis for data analysis.

Mulwa (2006) examined whether the future profitability of firms listed at the NSE as affected the signaling efficiency of dividend changes. The population consisted of the 48 companies listed at the NSE and covered a period of 5 years (1998 - 2002). Secondary data obtained from NSE, Stockbrokers, Kenya National Bureau of Statistics (KNBS) and Capital Market Authority (CMA). Comparison of actual dividend changes in relation to the earnings of the firm and also regression analysis was employed. The study established a relationship in the year of payment but for the first and second year after, the relationship was very insignificant.

Njiru (2007) examined whether the behavior of stock prices following stock dividend announcement showed evidence of under reaction anomaly at NSE. The population consisted of 48 companies listed in NSE from 1999 to 2006. A comparison-period-return approach was used in analyzing price movement. He found out that there was a continuation in the positive returns after the stock dividend announcement. This means that the impact of stock dividends announcement is not fully incorporated in every day stock prices.

Mundati (2012) conducted a survey with an objective of identifying the effects of macroeconomic variables and their influence the dividend payout and to estimate relationship between them from 2002 to 2012. The study used secondary data of dividend payout and macroeconomic variables from the NSE and Central bank of Kenya on dividend payout rates, inflation rates, interest rates, exchange rates and money supply. Significant relationship of dividend policy and the variables used in the study was established. The study concluded that macro-economic variables are very significant in determination of dividend payout by firms listed at the Nairobi securities Exchange Inflation rates have a significant positive relationship with dividend payout interest rates had very little impact on the dividend payout while exchange rates had a negative effect on the dividend payouts.

Mukanzi (2013) investigated the association of earnings on dividend policy of cyclical listed firms at the NSE. The study found out that earnings and sales growth strongly affect dividend payout. It also established that leverage influence payout moderately while liquidity has an insignificant effect on payout. The regression results of the study identified earnings, sales growth, liquidity and leverage as important determinants of dividend payout.

Mutie (2011) investigated the relationship between prior period dividend and performance of listed firms from 2006 to 2010. Spearman's rank correlation and Pearson product moment correlation were utilized to examine the linear dependence of the variables used and to what extent they explained the model. The study found out that both linear and monotonic association between prior period EPS and DPS existed. The strength of the model was medium meaning that prior period DPS is one among other factors that affect subsequent period EPS.

2.5 Summary of Literature Review

The profitability of companies has been observed to have an effect on the dividend policies adopted by the firms. High profitability has been assumed to boost the earnings of a firm hence inducing high dividend payouts to the shareholders. On the other hand, low profitability will reduce the liquidity of the firm thereby forcing the companies to pay low dividends or no dividend at all.

Many studies have been done on the effect of a firm's profitability on the dividend policy. Other studies have been conducted to examine the determinants of dividend payout policies. Several variables have been used concurrently on different industries and firms. However, these studies have continued to create more gaps in the field of finance in relation to dividend policy. The dividend policy puzzle has never found a universally accepted solution. Contradictory findings and results have been put forward in various literatures. This study therefore was intended to pursue the endeavor to solve the puzzle in relation to profitability and its effect on dividend policy strategies adopted by firms.

2.6 Conceptual Framework

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┌──────────────────┐
│  Profitability   │─────────┐
└──────────────────┘         │
┌──────────────────┐         │
│    Liquidity     │────────►│
└──────────────────┘         │        ┌──────────────────┐
┌──────────────────┐         ├───────►│  Dividend Policy │
│    Earnings      │────────►│        └──────────────────┘
└──────────────────┘         │
┌──────────────────┐         │
│   Company Size   │────────►│
└──────────────────┘
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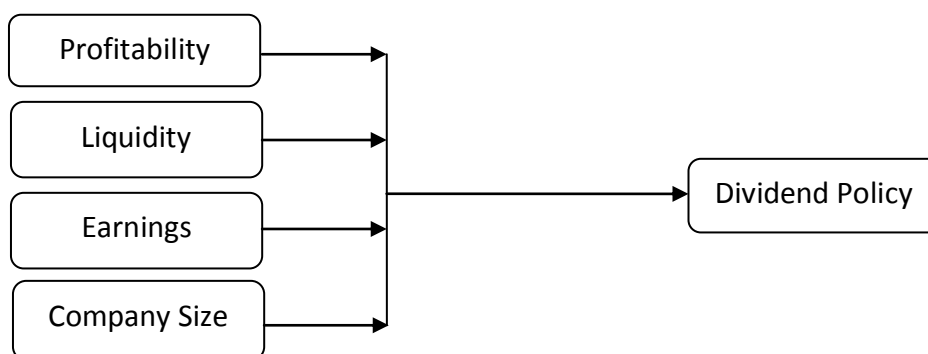
Source: Author (2016)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of the study was to examine the effect of profitability on the dividend policy of manufacturing firms listed at the Nairobi Securities Exchange. This chapter introduces the logical framework followed to enable the researcher meet the objectives of the study. Explanation of the research design, population and the sample are explained. An outline of the approach adopted in data collection and analysis to give answer to the research question is also provided.

3.2 Research Design

Research design means a plan, structure and policy of investigation conceived to acquire answers to a research problem. It specifies methods and techniques for collecting, measuring and analyzing data (Rahman & Ramos, 2013). This study adopted the descriptive design because it allowed analysis and correlation of study variables. According to Cooper and Schindles (2003), describes, by creating group profile problems, through gathering of data and frequency tabulation of frequencies on study variables or their association.

3.3 Population and Sample

According to Ngechu (2006), a population is a set of individuals, cases or objects with common observable features. The study concentrated on 10 manufacturing firms listed at the NSE in Kenya those were actively operational up to December 2015 (see appendix 1). Since the population is small the researcher considered all the 10

manufacturing firms. Therefore a census survey was carried out. The size was decided considering time and costs required to gather data while reducing the margin of error.

3.4 Data Collection

Gathering of data is an important exercise in collecting information required to answer the research question and achieve the objective of the research. The data used in the study comprised of yearly published financial reports of the 10 manufacturing companies listed from the 2011 to 2015 to give current inferences. Secondary data improves the clarity of the problem and the situation surrounding the issue. It also provides depth and act as a road map in the study being undertaken. The data collection method adopted for the study was quantitative method.

3.5 Data Analysis

Blalock (1978) postulated that the aim of descriptive statistics is to provide a succinct picture of by the organization, summarization and presentation of the study data. The statistics include the mean, standard deviation, percentages, frequencies and tables. This study utilized the Statistical Package of Social Sciences to analyze the quantitative data collected.

As indicated in the model below, the association between the dependent variable and the predictor variables were examined by use of multiple linear regressions.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$, Where:

Y = Dividend policy which was calculated by dividing dividends paid by the earnings for the year on a per share basis.

β_0 = Regression constant which is the constant dividend payout the manufacturing firms adopted.

$\beta_1, \beta_2, \beta_3, \beta_4$ are regression coefficients which indicates the existence of an association between dividend payout and other variables under study.

X_1 is profitability of the firm and is an independent variable Measured by Return on Equity.

X_2 = Liquidity

X_3 = Earning of the companies

$X4$ = size of the company as measured by the asset base of the firm.

ε is the error term.

The test of significance was also conducted in order to establish the association between the variables in the study. When variables are linearly related, the relationship is usually of the form Y=a+bx. If the relationship is non-linear, a unit change in one variable does not cause a constant change in a corresponding variable. The changes also tend to vary at a fluctuating rate. The degree and direction of the association is investigated by use of a correlation coefficient. This coefficient measures the correlation of two or multiple variables. The study utilized the Pearson Correlation to examine the degree and direction of the association.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

Chapter four makes an analytical presentation and interpretation of data collected to achieve the research objective. The presentations of the findings in this chapter investigate the association between profitability and dividend policy in NSE listed manufacturing firms. Presentation of the descriptive statistics, regression analysis results and correlation analysis is done in sections 4.2, 4.3 and 4.4. Section 45 presents the interpretation of the findings and discussions.

4.2 Descriptive Statistics

Combined data for all the manufacturing firms in Kenya under study was analysed. Table 1 show the results of a multivariate analysis which was conducted.

Table 1: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Dividend Policy	0.00	0.99	0.6343	0.3100
Profitability	-0.25	5.41	0.6265	1.68608
Liquidity	0.95	7.05	2.0495	1.8084
Earnings	0	23.74	5.1218	7.91654
Firm Size	1.2	4.71	3.2332	1.15097

Source: Author 2016)

Dividend policy was the dependent variable having a minimum, maximum, mean and standard deviation of 0.00, 0.99, 0.6343 and 0.31 respectively. From the results of the mean, it can be deduced that approximately 63.43% of the earnings were distributed as dividends. Profitability had a minimum, maximum, mean and standard deviation of -0.25, 5.41, 0.6265 and 1.6861 respectively. Liquidity as measured by current ratio

had a minimum, maximum, mean and standard deviation of 0.95, 7.05, 2.0495 and 1.8084 respectively. Earnings had a minimum, maximum, mean and standard deviation of 0.00, 23.74, 5.1218 and 7.91654 respectively. Firm size had a minimum, maximum, mean and standard deviation of 1.20, 4.71, 3.2332 and 1.15097 respectively. From the analysis results, the earnings of the manufacturing firms had the highest variability of 7.917 with the dividend policy reporting the lowest variability of 0.31.

4.3 Regression Analysis

Formulation of a multiple linear regression equation was done in the study. The equation considered profitability as the independent variable and dividend policy as the dependent variable. The control variables were liquidity, earnings and the size of the firms. The results of the regression model are as per the Table 2 below.

Table 2: Regression Model Summary Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.851[a]	.724	.504	.21844	2.347

a. Predictors: (Constant), Firm Size, Current Ratio, Earnings, ROA

b. Dependent Variable: Dividend Policy
Source: Author (2016)

As indicated in Table 2, the coefficient of determination (R Square) was 0.724. This implies that the predictor variables could explain about 72.4% of the model adopted. Table 3 provides the results of the regression coefficients.

Table 3: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig. 1
		B	Std. Error	Beta		
1	(Constant)	.569	.288		1.974	.105
	Profitability	.301	.089	1.634	3.362	.020
	Liquidity	.012	.043	.070	.280	.791
	Earnings	-.053	.018	-1.364	-3.025	.029
	Firm Size	.039	.076	.144	.512	.630

a. Dependent Variable: Dividend Policy

Source: Author (2016)

The regression coefficients for profitability was +0.301. Liquidity had a positive coefficient of 0.012. Earnings have a negative coefficient of -0.053. Firm size had a regression coefficient of +0.39. The p-value for profitability as indicated was 0.02 and the p-value earnings was 0.029 which were <0.05. This implies that profitability and earnings were statistically significant at 5% significance level. Liquidity and firm size have a p-value of 0.791 and 0.63 respectively. Conversely this implies that liquidity and firm size were not statistically significant at 95% confidence level. From the results, the coefficients can be summarized by the regression model as indicated below.

$$Y = 0.569 + 0.301X_1 + 0.012X_2 - 0.053X_3 + 0.039X_4 + \varepsilon$$

The analysis of variance (ANOVA) is presented in Table 4 below.

Table 4: ANOVA for Profitability and Dividend Policy

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.626	4	.157	3.282	.112[a]
	Residual	.239	5	.048		
	Total	.865	9			

a. Predictors: (Constant), Size, Liquidity, Earnings, Profitability

b. Dependent Variable: Dividend Policy

Source: Author (2016)

The table shows that the F-test is 3.282 and the probability is 0.112. The significance is more than 0.05. This means that the there was no statistical significance of the independent variables combined. This also indicates that the null hypothesis should be accepted hence there is no effect of a firm's profitability on the dividend policy adopted.

4.4 Correlation Analysis

In the study, a correlation matrix was established for the various possible associations amongst the variables. Table 5 below provides the results.

Table 5: Correlation Matrix

	Dividend Policy	Profitability	Liquidity	Earnings	Firm Size
Dividend Policy	1				
ROA	0.426324669	1			
Current Ratio	-0.203584057	-0.023105367	1		
Earnings	-0.052538595	0.82857125	0.168230228	1	
Size	-0.208026506	-0.53131903	-0.046764309	-0.381004183	1

Source: Author (2016)

The results of the correlation analysis indicated that dividend policy is positively correlated with profitability as shown by the correlation coefficient of 0.4263 in Table 5. The results also provide negative correlation coefficients for liquidity, earnings and firm size. This reveals that the dividend policy will increase when the liquidity,

earnings and size of the firm declines. The vice versa is also applicable. The strongest predictor of dividend policy established in the study was profitability with a coefficient of +0.426. This means that when profitability increases, the company's ability of profit distribution in form of dividends also increases.

4.5 Interpretation of Findings and Discussions

The study findings established that the dependent variable which was dividend policy had a minimum, maximum, mean and standard deviation of 0.00, 0.99, 0.6343 and 0.31 respectively. From the mean of the dividend policy, it can therefore be deduced that about 63.43% was distributed as dividends. Profitability had a minimum, maximum, mean and standard deviation of -0.25, 5.41, 0.6265 and 1.686 respectively. The mean of 0.6265 represents the percentage of profits generated from the total assets.

Liquidity as measured by current ratio had a minimum of 0.95 and a maximum of 7.05, mean of 2.0905 and a standard deviation of 1.8084. Liquidity was measured by the current ratio. This means that the manufacturing companies under study are of good liquidity of a mean of 2.0905 implying that they can meet their obligation when they fall due. Earnings had a minimum of 0.00, a maximum of 23.74, mean of 5.1218 and a standard deviation of 7.917. Liquidity was determined by dividing earnings by dividends to determine the amount of earnings to be paid as dividends. A mean of 5.1218 mean that a unit of dividend was paid for every 5.1218 units of earnings made by the manufacturing firms. From the analysis results, the earnings of the manufacturing firms had the highest variability of 7.917 with the dividend policy reporting the lowest variability of 0.31.

The size of the firms had a minimum, maximum, mean and standard deviation of 1.20, 4.71, 3.2332 and 1.151 respectively. The mean reveals that most of the manufacturing firms under the study are medium sized. As indicated in Table 2, the coefficient of determination (R Square) was 0.724. This implies that the predictor variables used could explain about 72.4% of the model adopted.

The regression coefficients for profitability was +0.301. Liquidity had a positive coefficient of 0.012. Earnings have a negative coefficient of -0.053. Firm size had a regression coefficient of +0.39. The p-value for profitability as indicated was 0.02 and the p-value earnings was 0.029 which were <0.05. This implies that profitability and earnings were statistically significant at 5% significance level. Liquidity and firm size have a p-value of 0.791 and 0.63 respectively. Conversely this implies that liquidity and firm size were not statistically significant at 95% confidence level.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter provides the summary, conclusions and recommendations to the study. Further, the study objective has been revisited to link it to the findings. This is after a detailed discussion of the research findings in the previous chapter. The chapter also provides suggestions for further research in light of what the current study did not consider and the new research gaps that the study has revealed to facilitate further research.

5.2 Summary of Findings

Dividend policy had a minimum, maximum, mean and standard deviation of 0.00, 0.99, 0.6343 and 0.31 respectively. Profitability had a minimum of -0.25, a maximum of 5.41, mean of 0.6265 and a standard deviation of 1.686. Profitability was measured by return on assets. The mean of 0.6265 represents the percentage of profits generated from the total assets. Liquidity had a minimum of 0.95 and a maximum of 7.05, mean of 2.0905 and a standard deviation of 1.8084. Earnings had a minimum of 0.00, a maximum of 23.74, mean of 5.1218 and a standard deviation of 7.917. A mean of 5.1218 indicates that a unit of dividend was paid for every 5.1218 units of earnings made by the manufacturing firms. Firm size had a minimum, maximum, mean and standard deviation of 1.20, 4.71, 3.2332 and 1.151 respectively.

Table 4 indicates that the F-test is 3.282 and the probability is 0.112. The significance is more than 0.05. This means that the there was no statistical significance of the independent variables combined. This also indicates that the null hypothesis should be

accepted hence there is no effect of a firm's profitability on the dividend policy adopted.

The results of the correlation analysis indicated that dividend policy is positively correlated with profitability as shown by the correlation coefficient of 0.4263 in Table 5. The results also provide negative correlation coefficients for liquidity, earnings and firm size. This reveals that the dividend policy will increase when the liquidity, earnings and size of the firm declines. The vice versa is also applicable. The strongest predictor of dividend policy established in the study was profitability with a coefficient of +0.426. This means that when profitability increases, the company's ability of profit distribution in form of dividends also increases.

From the analysis results, the coefficient of determination (R Square) was 0.724. This means that the predictor variables used in the study could explain about 72.4% of the model adopted. Table 3 provides the results of the regression coefficients. The coefficient of determination is used to provide estimates of the proportion of variances for the variables. The coefficient is used in regression models to predict future outcomes. The model used in the study therefore indicates that the predictor variables were in relation to the dependent variable.

Correlation analysis results show that dividend policy is positively correlated with profitability. This is indicated by the correlation coefficient of 0.426. The results indicate that dividend policy has a negative correlation with liquidity, earnings and firm size. Liquidity of a firm determines the dividend policy to be adopted. If the liquidity is good, then the firm will have the ability to make high dividend payments. Strongest predictor of dividend policy established in the study was profitability with a

coefficient of +0.426. This means that when profitability increases, the company's ability of profit distribution in form of dividends also increases.

Regression coefficients for profitability was +0.301. Liquidity had a positive coefficient of 0.012. Earnings had a negative coefficient of -0.053. Firm size had a regression coefficient of +0.39. The statistical significance of the coefficients generated by the model at 5% significance level indicates a p-value of 0.02 and 0.029 for profitability and earnings respectively.

5.3 Conclusions

The study concluded that profitability affected dividend policy in manufacturing companies listed at the Nairobi Securities Exchange. The correlation coefficient between profitability and dividend policy indicated a weak positive correlation. This implies that when there is an increase in profitability, manufacturing firms will also increase the payment of dividends to their shareholders. This is consistent with the findings by Migwi (2015) who found out that there was a positive association between dividend policy and profitability of companies.

5.4 Limitations of the Study

The study made use of historical data which was analysed to draw conclusions in line with the study objective. Historical data may change and also the conclusions may change thus rendering the conclusions unusable in the future. Future users of the findings such as scholars and policy implementers may rely on the on the same data used and findings to forecast yet the same is not sufficient.

The research made use of secondary data which had been generated for other uses by the firms thus the data had to be extracted to define the requirements of the study.

Different manufacturing firms apply different financial management practices, policies and procedures which might affect the comparability of variables considered in the study. For example, the studied firms when calculating profits attributable to the shareholders included extraordinary items and general provisions while others did not. Other firms used shares in issue at a point in time when calculating earnings per share (EPS). There may have affected the relationship among the variables studied and their significance in answering the research question.

The study only examined the manufacturing firms listed at the NSE which are 10 in number. However, there are many manufacturing firms which do exist in the market. It was impossible to get data from all the firms listed at the NSE for all the variables and years under study. This is because A. Baumann Limited was not actively participating in the market during the period under study. Flame Tree Group got listed within the period under study. Eveready East Africa and Kenya Orchards did not make dividend payments in some years under study. However, the collected data from the manufacturing firms was considered sufficient for analysis and for achieving the study objective.

5.5 Recommendations

The study makes several recommendations that are aimed at addressing emerging trends and challenges in the manufacturing sector in Kenya. This section discusses the policy recommendations and provides recommendations for further research in subsections 5.5.1 and 5.5.2.

5.5.1 Policy Recommendations

The study established that there was a positive influence of profitability on dividend policy of listed manufacturing firms in Kenya. This study recommends adequate

measures to be put into place to improve and grow the profitability of the firms. Profitability growth can be achieved through efficiency measurement of the manufacturing plants. A good way to do this is by calculating how efficiently the plants are converting raw materials into finished products for both the plant as a whole and for individual products. This allows the management to compare themselves with others in the same sector and zero in on strong and weak performers in the product mix.

Boosting of profitability can also be done through lowering of prices on the most profitable products to increase their sales. This is followed by the increase of the prices of the least profitable items or the elimination of them altogether. Subsequently, enlisting the support of the employees is crucial. It helps streamline production and cutting of waste through lean manufacturing techniques. Involving the employees is a great way of encouraging them to participate in design and process changes that will make the firms' operations leaner and more innovative and competitive.

This study also recommends the formation and implementation of a manufacturing commission by the government in addition to the Kenya Association of Manufacturer. The commission will offer industrial sustainability and will involve the politicians in setting up and running the commission. It will also engage in driving new thinking around industrial policy in Kenya.

5.5.2 Suggestions for further Research

The research used return on assets to measure profitability. This research recommends an investigation using the value added index which is highly recommended by mechanical engineers than use of gross profit margin. The engineers argue that if a

company has the ability to boost the index then the plant is more productive and profitable.

The variables considered in this study were macroeconomic. The study recommends a future research to be conducted using a combination of both macro and microeconomic variables. This could focus on the manufacturing firms in Kenya entirely. The findings of such a study would be more reliable as they would reflect the actual manufacturing industry and also establish if market segmentation has any effect on dividend policy due to industry specific factors.

The study covered a five year period. Similar research can be conducted to cover an extended period of more than five years. This will ensure that more data is collected on the variables to adequately validate the findings.

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APPENDICES

Appendix I: Manufacturing Firms Listed at the Nairobi Securities Exchange as at 31st December 2015

1. EA Breweries Limited

2. British American Tobacco Ltd

3. Unga Group Ltd

4. Kenya Orchards Limited

5. Flame Tree Group

6. BOC Kenya Ltd

7. Carbacid Investments Ltd

8. Mumias Sugar Company Ltd

9. Eveready EA Ltd

10. A. Bauman Co. Limited

Source: www.nse.co.ke

Appendix II: Dividend Policy

Company	2011	2012	2013	2014	2015
BOC Kenya	0.4319	0.8820	0.4995	0.5010	0.4614
British American Tobacco	0.9904	0.9845	0.9936	0.9936	1.0897
Carbacid Investments	0.5525	0.5624	0.2629	0.4289	0.0485
East African Breweries	0.7826	0.7675	0.6184	0.6667	0.6344
Mumias Sugar	0.3883	0.3968	0.3788	0.0000	0.0000
Unga Group	0.2800	0.2101	0.2669	0.2896	0.2055
Eveready East Africa	0.0000	0.0000	0.0000	0.0000	0.0000
Kenya Orchards	0.0000	0.0000	0.0000	0.0000	0.0000
A.Baumann	0.0000	0.0000	0.0000	0.0000	0.0000
Flame Tree Group	0.0000	0.0000	0.0000	0.3800	0.2600

Appendix III: Profitability

Company	2011	2012	2013	2014	2015
BOC Kenya	0.0796	0.0828	0.0992	0.0770	0.0998
British American Tobacco	0.2106	0.2253	0.2155	0.2192	0.2342
Carbacid Investments Ltd	0.2342	0.1737	0.3853	0.2148	0.1937
East African Breweries Ltd	0.1671	0.1813	0.1938	0.1037	0.1266
Mumias Sugar	-0.2464	0.0843	0.0736	-0.0612	-1.4158
Unga Group Ltd	0.0517	0.0773	0.0543	0.0327	0.0477
Eveready East Africa Ltd	-0.0394	-0.1219	0.0609	0.0479	-0.1909
Kenya Orchards Ltd	5.4053	26.8273	0.0519	0.0432	0.0420
A. Bauman Co. Ltd	0.1149	0.2152	0.0528	0.0760	0.0965
Flame tree Group Holdings Ltd	0.0000	0.0000	0.1873	0.1702	0.1452

Appendix IV: Liquidity

Company	2011	2012	2013	2014	2015
BOC Kenya	2.4798	1.9401	2.0793	2.2270	2.1390
British American Tobacco	1.1699	1.3070	1.1779	1.2561	1.2491
Carbacid Investments Ltd	5.7823	8.8431	4.2579	10.0893	6.2963
East African Breweries Ltd	1.4856	1.0523	0.8031	0.6988	0.7211
Mumias Sugar	0.5607	2.1986	1.2536	0.8382	0.4093
Unga Group Ltd	2.5438	2.5245	1.9100	1.5288	2.3322
Eveready East Africa Ltd	1.4105	1.1154	1.2590	1.5402	1.3339
Kenya Orchards Ltd	1.8206	1.4656	1.7156	1.5503	2.3315
A. Bauman Co. Ltd	1.5528	1.3396	1.5062	1.2149	1.1461
Flame tree Group Holdings Ltd	0.0000	0.0000	1.1896	1.2061	1.5540

Appendix V: Earnings

Company	2011	2012	2013	2014	2015
BOC Kenya	0.4323	1.1343	2.0016	1.9960	2.2614
British American Tobacco	1.0097	1.0157	1.0725	1.1458	1.0910
Carbacid Investments Ltd	1.8093	1.7787	3.8042	2.3334	20.6777
East African Breweries Ltd	1.2773	1.3028	1.6167	1.4997	1.5771
Mumias Sugar	2.5693	2.5271	2.6310	0.0000	0.0000
Unga Group Ltd	6.2381	7.7676	6.1324	46.6972	6.7436
Eveready East Africa Ltd	0.0000	0.0000	1.3826	1.1209	0.0000
Kenya Orchards Ltd	59.9455	2.3079	1.2155	1.5777	53.6727
A. Bauman Co. Ltd	1.0230	1.4014	1.3270	1.4677	1.6481
Flame tree Group Holdings Ltd	0.0000	0.0000	1.0671	1.2119	1.7091

Appendix VI: Company Size

Company	2011	2012	2013	2014	2015
BOC Kenya	3.3053	3.2598	3.2988	3.4205	3.3618
British American Tobacco	4.0462	4.1383	4.1812	4.2301	4.2594
Carbacid Investments Ltd	3.1796	3.2405	3.3038	3.3451	3.4037
East African Breweries Ltd	4.5846	4.6965	4.7613	4.7984	4.7338
Mumias Sugar	4.2572	4.3604	4.4368	4.4357	4.3722
Unga Group Ltd	3.7045	3.7566	3.8069	3.9089	3.9045
Eveready East Africa Ltd	3.0777	3.0073	3.0610	2.9740	2.9685
Kenya Orchards Ltd	1.7271	0.4208	1.8409	1.8479	1.8467
A. Bauman Co. Ltd	1.1745	1.1421	1.1993	1.2544	1.2111
Flame tree Group Holdings Ltd	0.0000	0.0000	2.9036	2.9424	3.0230