

Determinants of Dividend Payout of Selected Quoted Brewery Firms in the Nigerian Exchange Group

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Abstract

The study examined at the factors that affect listed brewery firms dividend payouts in Nigeria between 2014 to 2022. Secondary data were employed using a longitudinal research approach. The population of the study is made up of 5 brewery firms quoted on the Nigerian Exchange Group (NGX) as at December 31st, 2022, of which four brewery firms with published annual reports and accounts for the period of the study were selected to comprise the study's sample and the sample was chosen using purposive sampling technique. The Panel Least Squares estimation method was used to estimate the model. The results of the study show that the dividend payout of Nigeria's listed brewery firms is highly influenced by firm size and leverage. Nevertheless, it was shown that the dividend distribution was not significantly influenced by profitability and firm age with the enumerated brewery firms used for this research. The study suggests that investors who prefer regular bonus payment should invest in large and highly leveraged brewery firms since firm size and leverage stimulates payment of dividend by brewery firms in Nigeria. Also, investors should not be convinced by the firms' age and profitability as firm age and profitability did not significantly influence dividend payout of listed brewery firms in Nigeria.

Keywords: Dividend Payout, Firm Age, Firm Size, Brewery Firms, Nigeria Exchange Group

INTRODUCTION

Dividend policy is one of the most contentious and most debated topics in the literature on modern corporate finance. Since the work of Miller and Modigliani (1961) and Lintner (1956). One of the most controversial topics in finance has been dividend policy. Amongst top ten unanswered questions in corporate finance literature is dividend policy. As Black (1976) put it, the whole image "looks more and more like a puzzle with pieces that just don't fit together the

harder we study at it." Companies have different dividend policies because of different laws, capital markets, taxation systems, and regulations in different nations.

Scholars including Brealey and Myers (2005), Jensen (1986), Fama and French (2001), and others have studied the "dividend puzzle" mentioned in Black (1976). There is still disagreement over what influences dividend payout. Thus, factors influencing a company's dividend policy are yet unknown. It's still up for dispute why companies pay out dividends on their profits. Therefore, the dividend conduct of corporate entities remains mysterious in the field of financial economics. However, standard finance theories (Miller & Modigliani, 1961; Jensen, 1986; and Charitou & Vafeas, 1998) state that among other things, a company's growth prospects, profitability, corporate tax, and size have a major impact on how much it pays out in dividends. It has been observed that these factors vary amongst companies, sectors, and countries.

The "dividend puzzle" mentioned in Black (1976) has been attempted to be solved by researchers [such as Fama & Jensen, (1983); Jensen, (1986); Fama & French, (2001); Brealey & Myers, (2005), among others], but these studies have not yet reached an agreement on what affects dividend distribution. Therefore, there is currently no conclusive explanation for factors that affect a company's dividend policy. There are still no clear solution to questions of why businesses distribute profits as dividends. As such, the financial economics community continues to be perplexed by the dividend conduct of corporate enterprises. However, according to some theories in finance [Miller & Modigliani, 1961; Jensen, 1986; Charitou & Vafeas, 1998], a firm capacity to pay out dividends is largely dependent on its potential for development, profitability, corporation taxation, and firm size, among other factors. It has been noted that these variables differ throughout businesses, sectors, and nations. But in reality, choosing the right payout policy frequently requires juggling a lot of competing considerations. The key elements are easy to recognize, but there is no simple solution because of the intricate relationships between them (Ross, Westerfield, & Jaffe 2009). This led Allen and Michaely (2003) to conclude that before an agreement on the topic of dividends can be formed, a great deal of more empirical and theoretical study is needed. Therefore, the aim of this study is to provide further knowledge of the variables affecting corporate dividend payout, especially with regard to Nigerian brewery firms.

According to the Annual reports from Africa financials and information from Africa markets on brewers sales in 2023, the brewery industry in Nigeria in 2022 had beer sales of N550.64 billion. The brewery firms that generated this sales amount for the period are Nigerian Breweries, Guinness Nigeria, International Breweries, and Champion Breweries. The 2022 sales were an increase over the 2021 figure of N437.29 billion which represents 25.86 percent. Nigeria's brewery industry was ranked 30th of 70 top beer markets in the world and contributed \$2.294 billion to the nation's GDP in 2019 (0.6 percent) of national (GDP) and created 309,200 jobs with the contribution of \$526.2 billion in the country's government revenue in 2019. The brewery industry in Nigeria has five known firms, amongst others, which produce beer and other non-alcoholic drinks on a very large scale. The ordinary shares of the listed brewery firms in Nigeria, do trade on the floor of Nigerian Exchange Group. The industry is a capital

intensive one as a result of the peculiar nature of the production lines and processes that is continuous; as well as in chain, requiring automation (Fijabi, Ogunlalu, & Modupeola, 2023).

The current body of empirical research has found that firm-specific factors, including profitability, age, growth potential, and size, play a significant role in determining dividend payout (Amidu & Abor, 2006; Osamwonyi & Arowoshegbe, 2009; Mehta, 2012; Alzomaia & Al-Khadhiri, 2013; Magambo, 2016.) This is a foundation for the selection of these study-relevant criteria. Previous empirical studies revealed that the relationship between these firm-specific characteristics and dividend distributions is highly contested. Some studies (Al-Malkawi 2007; Chijoke-Mgbame and Mgbame, 2009) found a positive significant link; other studies (Rafique, 2012; Arif & Akbar, 2013; Al-Sabah, 2015; Hartono & Matusin, 2020) found a negative non-significant relationship. There is a need for more research in this area because of how these empirical investigations are inconsistent and unresolved. Furthermore, an examination of the body of existing literature finds a dearth of empirical research that specifically addresses the factors influencing brewery firms' dividend payout, notably in Nigeria. Empirically, recent data were used for this research to investigate the factors influencing the dividend payouts of listed brewery firms in Nigeria in an effort to close this gap. Hence, the objective of this study is to empirically ascertain the factors that influence quoted brewery firms' dividend payout in Nigeria. The remainder of this paper is arranged as follows, section 2 is literature review, section 3 is methods and data, section 4 is discussion of findings and section 5 is conclusions and recommendations.

LITERATURE REVIEW

Conceptual Review

Dividend and Dividend Payout

Dividend: Dividend is a return that a shareholder receives from the company on his shareholdings (Black & Scholes, 1974). Dividends are amounts paid to shareholders from profits or distributable reserves, according to Davies and Pain (2002). The amount of money that companies give to their shareholders as a result of their financial success are known as dividends. These payments can be delivered in cash or as a script dividend—that is, by issuing additional shares. Dividend, as defined by Pandey (2004), is the portion of a company's net earnings that the directors recommend distributing to shareholders in proportion to their ownership interests in the business.

Dividend payouts: Dividend payouts, according to Hellstrom and Inagambaev (2012), are the portions of a company's earnings that are given to shareholders. Amount of dividend that a company pays to its shareholders is known as the dividend distribution. Large dividend payments in one period would limit the amount of money available for investment in succeeding periods, which would increase the likelihood of raising stock or debt to finance investment in the next quarter. The demand for external debt financing to make dividend payments would rise throughout the following term as a result of a significant investment spend, which would reduce the amount of money available to finance dividend payouts (Fumey & Doku, 2013).

Determinants of Dividend Payouts

Dividend payout determinants are elements that impact a company's dividend payout. The factors that determine a company's dividend payouts can be divided into two groups: macroeconomic and firm-specific factors (Muraya, 2018). Microeconomic (firm-specific) factors are firm-related and macroeconomic (industry-related, often known as external) elements are industry-related. Since firm characteristics are produced internally, they have a direct impact on the firm. They consider how a particular business could increase productivity and capacity to cut costs and compete better in its sector. They are made up of both financial and non-financial elements. Leverage, liquidity, and efficiency are all financial factors. Shareholding, labour, company's age, and the qualities of the board of directors are examples of non-financial elements. The key internal influences on a company's dividend policy include profitability, liquidity, earnings stability, asset structure, financial structure, and investment strategy (Al-kuwari, 2009). Profitability, company's age, leverage and firm size are among the firm-specific criteria taken into account in this study. These factors are explained below.

Profitability

Profits are what determine whether dividends should be paid. This makes sense to see profitability as a threshold element, with profitability level ranking among the most crucial variables that may affect a company's choice for paying dividends. According to the idea, the ability of the company to pay dividends is represented by the yearly earnings, which are used to pay dividends. Hence, companies that lose money are unlikely to pay dividends. In his seminal study, Lintner (1956) discovered that the key variable influencing dividend revisions is a company's net earnings. Moreover, a number of studies such as (Amidu & Abor 2006), (Adediran & Alade 2013), (Adelagan, Adeyemo & Adejuwon 2021) have shown that dividend distributions and profitability are positively correlated. Profitability is inferred from a company's return on assets, which is calculated by dividing profits before interest and taxes by the entire amount of assets.

Age

Every living thing has a limited lifespan during which it experiences several stages before coming to an end. According to the life cycle idea, businesses have equal life cycles to live. From its formative stage, it grows, stabilises and eventually ends. Numerous studies have come to the conclusion that a company's life cycle stage has an impact on its operations and financial activities, including paying dividends. A company's lifespan has four stages: introduction, growth, maturity, and decline. In this study, we utilize the year the company was founded as a stand-in for age, this postulates a positive correlation between age and dividend payment ratio.

Leverage

Leverage is described as a company's investment strategy that involves employing borrowed funds; ideally, it comprises use of various financial instruments or borrowed funds to boost an investment's potential return. It is the total amount of debt utilized to finance assets. The link between debt and equity financing in a company's long-term funding arrangement is known as its capital structure (Brealey & Myers 2005). Leverage is how a business uses debt to finance

the purchase of assets. In an ideal world, using debt would raise operating expenses, which would leave less money available to distribute to shareholders (Muraya, 2018). The ratio of a company's obligations to its equity is known as financial leverage (Sari, 2017). Financial leverage, on the other hand, depicts a company's capital structure in relation to its liabilities and equity to its assets, according to Zutter & Smart (2019). Higher levels of liabilities will result in higher costs for the liabilities, while lower levels will result in lower net income and lower dividend rates, and vice versa (Rehman, 2012; Zutter & Smart, 2019).

Company Size

The decision of a company to declare dividends could also be impacted by its size. Bigger businesses can pay more dividends because they often have a higher institutional ownership percentage, which facilitates their access to the capital market. Another rationale is that it would be harder to monitor a larger corporation. This and other manipulations by managers such as working capital and reported profits have made the conflict of agency relationships between managers and shareholders more complex. Consequently, larger corporations need to pay out higher dividends in order to mitigate the agency problems (Labhane & Das, 2015). The firm size is the total asset value of the firm. Natural log of market capitalization is our preferred measure of size.

Theoretical Review

Numerous theories have been uncovered in research and factors of dividend payout. They are, nevertheless, seen from various angles in respect to the setting in which they operate. This study discusses life cycle theory, dividend relevance theory, agency theory, signaling theory, and transaction cost theory.

Transaction Costs Theory

This theory states that the firms having higher proportion of debt finance in total capital will have higher level of commitment to pay the fixed interest charges and this will reduce the dividend payment to common equity shareholders (Higgins, 1972). When a business uses debt financing to borrow money, it guarantees to pay back the principal amount in the event of bankruptcy as well as the fixed interest rate on the debt. As a result, the risk associated with a larger financial leverage ratio leads to a reduced dividend payment because, under normal circumstances, a company needs its own profit to cover its interest obligations rather than distributing it as dividends to common stock shareholders.

The Agency Theory

The agency theory was propounded by Jensen and Meckling (1976). According to this idea, agency problems develop between the primary owners (shareholders) and the agent (manager) when the management takes actions that are not in the best interests of the shareholders and are in their own self-interest. For example, they may overspend on bonuses, overinvest in negative NPV initiatives, or expand the business's size beyond its appropriate capability because management compensation is proportional to firm growth. The payment of dividend to common equity shareholders will reduce the excess free cash flow available with the manager

thereby reducing the agency problem between the manager and shareholders (Jensen & Meckling, 1976; Rozeff, 1982 and Easterbrook, 1984). Bondholders and stockholders may also face an agency dilemma. The greater the amount of tangible or collateralizable assets, the greater the level of protection for bondholders, and hence the lower the agency problem caused by disputes between bondholders and equity owners.

Signaling Theory

The theory was propounded by Modigliani and Miller (1961) who argued that dividend may have a signaling effect. Advocates of this idea claim that stockholders or potential stockholders predict the firm's profitability, which are mostly decided by the dividend rate. They also claim that dividends have a signaling effect. Companies are required to pay dividends to their owners, and high bonus payments are seen by investors as a sign of a successful company. Dividend payments offer facts about the firm to the market and have a signaling effect. With dividend announcements, shareholders, investors, and potential investors forecast a company's profitability. An increase in dividend payments benefits a business since it raises share price, cultivates goodwill among stakeholders, and enhances customer opinion of the brand.

Signaling hypothesis states that there is an information gap between insiders (managers) and outsiders (shareholders). The management has access to private information about the company's current situation and future possibilities, which is not known to the public. The management may choose to give shareholders access to this exclusive information in the form of dividends (Bhattacharya, 1979, John and Williams, 1985, and Miller and Rock, 1985). In this sense, dividends are a signaling instrument, and managers who reveal private information to outside parties may receive rewards for doing so.

Dividend Relevance Theory

The dividend relevance theory was propounded by Walter (1963). He maintained that the firm's worth is nearly always impacted by the dividend policies chosen. Link between a company's cost of capital and rate of return is crucial in figuring out the dividend policy that will optimise shareholder value, as demonstrated by Walter's model. Presumptions that form the foundation of Walter's model are as follows:

First, no new equity or debt is issued by the company; instead, all investments are financed through retained earnings. Second, cost of capital and the firm's rate of return are fixed. Thirdly, any profits are promptly reinvested inside the company otherwise paid out as dividends. Fourth, the dividend and earnings per share are still the same. And lastly, the company will always exist. This model is thought to be highly helpful in illustrating how bonus policy affects an all-equity company under various rate of return assumptions. Though valid for Walter's model, the model's simplicity might result in findings that are not true for other models.

Life Cycle Theory

The life cycle theory proposed by Mueller (1972) states that any firm has a well-defined life cycle and is fundamental to the firm life cycle theory of dividend. Mature companies pay

higher shares because they have less investment prospects, greater accumulated profit, and retained earnings. In contrast to this, younger firms are in the stage of new growth opportunities and need to build reserves of profit to finance their growth opportunities which result in less dividend payment (DeAngelo, et al., 2006). Positive associations were assumed between age and dividend payment ratio. The life cycle variable age is defined as the year the firm has been in existence, is utilised as a proxy for this study.

Empirical Review

The factors influencing the dividend payment ratios of Ghanaian listed businesses are examined by Amidu and Abor (2006) from 1998 to 2003. Findings from the ordinary least square regression used to estimate the model indicate that dividend payout ratios and cash flow, taxation, and profitability are positively correlated. Additionally, the findings indicate a negative correlation between share distribution and growth, risk, institutional ownership, and market-to-book value. Nonetheless, the cash flow, profitability, market to book value and sales growth are the important factors in the outcomes.

From 2001 to 2006, investigation on factors influencing and changes in the dividend policy of non-financial listed companies on the Karachi Stock Exchange was determined by Ahmed and Javid (2009) using the Generalised Method of Moment (GMM) as an estimating technique. The expanded model of Linter, Babiak, and Fama as well as the suggested model in a dynamic context are used to analyse the dynamics of dividend payout. The findings showed Pakistani non-financial listed companies rely on both current earnings and previous dividends. They came to the conclusion that companies with steady profits and revenues are able to afford larger unrestricted cash flows, which allows them to pay out larger dividends. Moreover Liquidity and ownership concentration have a beneficial impact on dividend decisions. Leverage, size, market capitalization, and slacks, all have an adverse effect on dividend decisions.

Chijoke-Mgbame and Mgbame (2009) investigate the determinants of dividend payouts of listed financial firms in Nigeria for the period 2004 – 2008. Ordinary least square regression analysis was used to analyze the effect of three variables (profit after tax, size and leverage) on dividend policy. The result from the study reveals that profit after tax and leverage have positive relationship with payout ratio while size assumed a negative relationship with payout ratio

Osamwonyi and Arowoshegbe (2009) investigate the effect of total assets, relative size of companies and asset growth on dividend policy of quoted companies in Nigeria for the period 1994 - 2004. Using multiple regression to analyse the data, five companies, each from Petroleum, Banking, Conglomerate, and Insurance and Brewery sectors of the economy were chosen in carrying out the analysis. The result from the study revealed a significant positive relationship between the dependent and independent variables as a group. Out of the three variables examined in the study, only relative size of company proved to be a good determinant in one of the five companies studied.

In a study carried out by Mehta (2012) in Abu Dhabi Stock Exchange for a five years period starting from 2005 to 2009 to investigate the impact of risk, size, profitability, liquidity and

leverage of firm on dividend payout on different industries (construction, real estate, energy, health care and telecommunication sector). Using ordinary least square regression analysis, the main variables that considerably alter the choice to pay out dividends were profitability and size, according to the findings.

Rafique (2012) examined the influence of size of firm, earnings, leverage, growth, profitability and corporate tax on dividend policy of Non-Financial firms listed in KSE100 index for 5 years period of 2005 to 2010 in Pakistan. Using ordinary least square regression analysis, only two of the six factors that were looked at, business tax and business size—were determined to be significant, according to the findings. Regarding Pakistani markets, the others are negligible.

The variables impacting the dividend policy of non-financial listed businesses on the Saudi Arabia Stock Exchange (TASI) from 2004 to 2010 are examined by Alzomaia and Al-Khadhiri (2013). Using ordinary least square method of data analysis, past dividend payments, leverage, growth, pays per share and company size are among the variables examined. They discovered a favourable correlation between dividend distribution decisions and profitability from the previous year. When a company's profitability rises, they boost dividend payments. Dividend payout decisions also take into account the dividend paid from the previous year.

The study conducted by Zameer, Rasool, Iqbal, and Arshad (2013) investigated the impact of several variables on the dividend policy of international and domestic banks that are listed on different stock markets in Pakistan for the period 2003 to 2009 using stepwise regression analysis, profitability, business size, growth, leverage, liquidity, agency cost, previous dividend, risk, and bank ownership structure are among the characteristics that were studied. The dividend policy of banks is shown to be significantly influenced by only four criteria. In the banking industry, dividend payout is negatively correlated with liquidity, while profitability, prior dividend payments, and ownership structure have a positive correlation. The other considerations under investigation are determined to be negligible and unrelated to the dividend decision. Arif and Akbar (2013) studied the impact of five factors including profitability, size, tax, growth and lifecycle stage on dividend payout of non-financial firms of Pakistan's Karachi Stock Exchange from 2005 to 2010. Panel Data analysis was used for the analysis. They discovered that every aspect has a big impact on dividend distribution. While tax has a negative impact on dividend payment decisions, profitability, size, and investment opportunities all positively influence dividend distribution.

Javid (2014) investigated whether a relationship exists between dividend payout and life cycle stage of firms for chemical firms listed in Pakistan for the period 2006 - 2011. The retained earnings/total equity was employed as a stand-in for the company life cycle stage. Additional factors that impact dividend distributions include growth rate, business size, age, retained earnings, debt-to-equity ratio, return on earnings, and management effectiveness. Ordinary least square regression analysis was performed on the data. The study's findings demonstrate that there is no connection between a company's life cycle stage and dividend distribution. It is discovered that while business size, age, retained profits, return on equity, and management efficiency have a direct link with dividend payout, debt/equity ratio, growth rate and life cycle stage have a negative relationship.

The factors affecting the dividend payout of consumer goods businesses listed on the Nigerian Stock Exchange between 2006 to 2015 are examined by Okoro, Ezeabasili, and Alajekwu (2018). The independent determinants included the company's size, market value, profitability, financial leverage, and dividend payout from the prior year. Multiple regression analysis and descriptive statistics were both applied. According to the research, a firm's market value has a substantial direct influence on dividend distribution, whereas factors such as size, profitability, leverage, and last year's dividend all have a direct but little impact. The study's findings show that market value and dividend from the prior year are the main factors influencing dividend payout in the study.

Hartono and Matusin (2020) look into the factors that affect the dividend distribution of real estate, property, and building construction businesses listed on the Indonesia Stock Exchange (IDX) over a seven-year period, from 2013 to 2019. The data were estimated using panel data regression analysis. The data showed that preceding year payout had a beneficial impact on dividend policy, but business size had a negative effect. It was observed that a company's dividend policy is mostly determined by its size and the dividend paid the year before. Investors should take these factors into account when making investments to optimise profits.

For the years 2016 to 2018, Pinem, Tindangen, and Cahyani (2020) investigate what factors determine the dividend policies of manufacturing businesses listed on the Indonesia Stock Exchange (IDX). In the analysis, panel data regression was used. The results of the panel data regression test indicate that, in contrast to leverage, profitability has a considerable impact on dividend policy.

Yahaya, Nuhu, and Salihu (2021) look at how profitability affected listed consumer products companies in Nigeria's dividend distribution from 2010 to 2019. Correlational research designs and ten of the twenty listed consumer goods businesses in Nigeria are used in this study. The results of the regression analysis demonstrate a positive and statistically significant relationship between the profitability and dividend payout of listed consumer products companies in Nigeria. The factors influencing dividend policy in Nigerian listed brewing companies from 1986 to 2019 are examined by Ebi and Nkakek (2022). The data analysis methods used were Granger Causality tests and error correction models. Findings reveal that inflation rate, lending rate, debt/equity ratio, present net incomes per share, and liquidity exhibited statistically significant effects on dividend distributions.

METHODOLOGY

The longitudinal design of research was adopted in this study to analyse the data used in the model. This approach was chosen because the variables under consideration are historical in character and were collected over a period of time. This study's population consists of five firms in the brewery industry recorded on the Nigerian Exchange Group as at 31st December, 2022. The study considered brewery firms that have up-to-date information of the annual reports and books of accounts published, for the period of research (2014-2022). There are five brewery firms listed on the Nigerian Exchange Group as at 31st December, 2022 which are Nigerian Breweries Plc, Guinness Nigeria Plc, Champion Breweries Plc, International Breweries Plc, and Golden Guinea Breweries Plc. The brewery industry was chosen

considering its contribution to the GDP of Nigeria. The sample size for the study is 4 due to the availability of annual reports and accounts of the quoted brewery companies on the Nigerian Exchange Group as of 31st December 2022. Four companies that had complete data on the study's variables were used. Golden Guinea Brewery PLC was not considered due to incomplete annual reports and accounts for the period of the study (2014-2022). The use of purposive or convenience sampling is based on the availability of data.

Theoretical Framework

Knowing the factors of dividend payout ratio modeled in this paper relies heavily on agency theory. Rozeff (1982) in his model minimizes the sum of the transaction cost and agency cost and finds that the dividend payout is a significantly negative function of the firm's past and expected future growth rate of sales, a significantly negative function of its beta coefficient, a significantly negative function of the percentage of stock held by the insiders and a significantly positive function of the firm's number of common stockholders. However, this research will investigate factors of profitability, firm size, firm age and leverage.

Model Specification

The specified model examines determinants of dividend pay-out of listed brewery firms in Nigeria. This study adapts the model of Pinem, Tindangen, and Cahyani (2020) with some modification in terms of the determinants of dividend pay-outs variables utilized in this particular research. Pinem et al., (2020) utilized two factors (profitability and leverage) in their model as stated. $DPR_i = \beta_0 + \beta_1PROF_i + \beta_2LEV_i + \epsilon_i$

However, in this study we employed four factors – profitability, firm size, age and leverage. The model for this study can be specified in functional form as:

$$DIVP = f(PRO, FSZ, AGE, LEV) \dots\dots\dots (1)$$

Transforming equation (2) into its panel data form, the model takes the following specification:

$$DIVP_{it} = \beta_0 + \beta_1PRO_{it} + \beta_2FSZ_{it} + \beta_3AGE_{it} + \beta_4LEV_{it} + \epsilon_{it} \dots\dots\dots (2)$$

Where;

DIVP = Dividend Pay-out

PRO = Profitability

FSZ = Firm Size

AGE = Firm Age

LEV = Leverage

β = constant or intercept

$\beta_1 - \beta_4$ = coefficient of independent variables

ϵ_{it} = error term signifying other independent variables that were not included in the model.

i represents the manufacturing firms which is from 1 to 4, while t represents time period which is 2014 – 2022.

The *a priori* expectations with respect to sign: $\beta_1, \beta_2, \beta_3, > 0; \beta_4 < 0$. Theoretically, the dividend payout is predicted to be positively impacted by profitability, business size, and firm age. Leverage, however, is predicted by theory to have a negative relationship with a company's dividend payout.

Measurement of Variables

The variables adopted are defined in Table 3.1.

Table 3.1: Measurement of the Variables

S/N	Variable	Type of Variable	Measurement	Source
1	Dividend Payout (DIVP)	Dependent Variable	Total yearly dividends paid/total asset	Financial statements of sampled Brewery firms
2	Profitability (PRO)	Independent Variable	Profits after tax/sales	Financial statements of the sampled Brewery firms
3	Firm Size (FSZ)	Independent Variable	Logarithm of total asset	Financial statements of the sampled Brewery firms
4	Firm Age (AGE)	Independent Variable	Firm listing age	Financial statements of the sampled Brewery firms
5	Leverage (LEV)	Independent Variable	Market to book ratio of equity	Financial statements of the sampled Brewery firms

Researcher’s Compilation, (2024).

Method of Data Analysis

In this study, two main methods are used: statistical and econometric. The statistical technique employs descriptive statistics and correlation analysis. Correlation was utilised to assess the degree of relationship between dependent and independent variables. Analytical Correlations was also utilised to demonstrate the degree of correlation between the dependent and independent variables. Panel Least Squares (PLS) estimation technique is employed as to the inferential statistic.

RESULTS AND DISCUSSION

This section focuses on the data analysis and interpretation based on the empirical technique used. To give a robust inquiry and analysis of the study, two general approaches were employed in the empirical analysis, namely statistical and econometric methodology.

Descriptive Statistics

Table 4.1: Descriptive Statistics

	DIVP	PRO	FSZ	AGE	LEV
Mean	39.06417	3.170158	7.865056	38.00000	59.08514
Median	33.54000	4.295450	8.104500	39.00000	57.61000
Maximum	151.9400	17.04400	8.649000	56.00000	150.4000
Minimum	-111.3000	-19.66000	6.833000	18.00000	4.285000
Std. Dev.	51.84119	7.802253	0.641841	11.68149	29.90241
Skewness	-0.091708	-0.794100	-0.306939	-0.196326	1.335358
Kurtosis	3.549610	3.778646	1.483519	1.789425	5.902234
Jarque-Bera	0.503568	4.693001	4.014839	2.429504	23.33352
Probability	0.777412	0.095703	0.134335	0.296784	0.000009
Sum	1406.310	114.1257	283.1420	1368.000	2127.065
Sum Sq. Dev.	94062.82	2130.631	14.41861	4776.000	31295.40
Observations	36	36	36	36	36

Source: Researcher's Computation, (2024) from E-view 9.0 Software

Table 4.1 demonstrated a high degree of consistency for firm profitability (PROF), firm size (FSZ), Age of firm (AGE) and leverage (LEV), and by revealing that the ratio between mean and median values is about one. The minimum and maximum values have a significant difference with a large standard deviation. With the exception of PRO, FSZ and AGE, which are negative and skewed to the left, the two other factors taken into consideration (DIVP and LEV) have positive values and are skewed to the right with a long tail. When compared to normal, the peaked features of DIVP, PRO, and LEV exhibit kurtosis values larger than three (3). The Jarque-Bera (J-B) statistic for each variable shows that all of them except LEV has a normal distribution attribute; this is because they have probability values that are not significant at the 5% level while LEV has a probability value that is significant at 1% level. As a result, all the variables except LEV are normally distributed.

Correlation Analysis

It is critical to investigate the degree and direction of link between the variables in the study in advance. These investigations are carried out using correlation analysis. Table 4.2 shows the results of the correlation tests.

Table 4.2: Correlation Results

	DIVP	PRO	FSZ	AGE	LEV
DIVP	1.000000				
PRO	0.213839	1.000000			
FSZ	0.602179	0.367876	1.000000		
AGE	0.318718	0.165164	0.481823	1.000000	
LEV	0.240757	-0.476835	0.001796	-0.269286	1.000000

Researcher’s Computation, (2024) from E-view 9.0 Software

The correlation result in table 4.2 show that all the independent variables have positive relationship with DIVP. This implies that increase in these variables increase DIVP during the studied period as indicated by their corresponding positive coefficients. Similar sign and effect were displayed among the independent variables. For instance, FSZ and AGE are completely related to PRO while LEV was negatively related to PRO. Furthermore, AGE and LEV were positively related to FSZ. However, LEV and AGE were negatively related. Furthermore, Table 4.2 also revealed the absence of multi co-linearity problem among the explanatory variables since no correlation coefficient between explanatory variables is > 0.80 as suggested by Gujarati (2008). Hence, the variables can be used for regression analysis.

Empirical Results on the GMM Analysis

This part presents and analyses the findings of the estimated equation that was given in section three. The panel least squares regression technique was used for the analysis and the result displayed in Table 4. The R² which measures the goodness of fit of the regression estimation stood at 0.4585586 but the adjusted R² stood at 0.388726, indicating that about 38.87% of the systematic variation in the dependent variable is accounted for by the explanatory variables. This is an indication that the regression estimate is reliable. The F-statistic, which is a test of explanatory power of the model is 6.564377 with a corresponding probability value of 0.000601, is statistically significant at 1% level. In other words, it showed that the independent variables have joint effect on the dependent variable. Therefore, this implies that the four explanatory variables (PRO, FSZ, AGE and LEV) have joint significant effect on dividend payout (DIVP) in Nigeria. The presence of serial correlation in regression output may suggest that the estimation is not dependable for policy direction. To be sure that the regression result of this study is not spurious, the Durbin-Watson statistic in Table 4 check for autocorrelation. The Durbin-Watson statistic which stood at 1.876699 validates absence of serial correlation in the regression output. Since the regression meets all the necessary diagnostic conditions, the

study concludes that it is appropriate for policy direction. Based on this, the study went ahead to interpret the effect of the explanatory variable on dividend payout in the regression result in Table 4.

Table 4.3: Panel Least Squares Results for Determinants of Dividend Payout

Dependent Variable: DIVP

Variable	Coeff.	t-Stat	Prob.
C	-314.3864	-3.394521	0.0019
PRO	1.373692	1.219858	0.2317
FSZ	35.57837	2.561736	0.0155*
AGE	0.782319	1.086617	0.2856
LEV	0.669233	2.330339	0.0265*
R-squared	0.458586		
Adjusted R-squared	0.388726		
F-statistic	6.564377		
Prob(F-statistic)	0.000601		
Durbin-Watson stat	1.876699		

* indicate 1 percent level significance.

Source: Researcher’s Computation, (2024) from E-view 9.0 Software

By examining the explanatory variable's coefficients in terms of sign and significance, one may notice the pattern of each explanatory variable's unique influence inside the model. The data of individual significance of the explanatory variables in the study, the result shows that firm size (FSZ) and leverage (LEV) exerts positive but insignificant impact on brewery firms’ dividend payout (DIVP) in Nigeria. Result showed that the coefficient of firm size (FSZ) and firm age (AGE) observed significant positive impact on brewery firms’ dividend payout (DIVP) in Nigeria.

Discussion of Results and Policy Implications

The findings and the policy implications of our empirical result are discussed in the following paragraph. Profitability (PROF) has an insignificant positive influence on dividend payout (DIVP) during the period covered by this study and the positive sign is in line with the *a priori* expectation. The implication of this finding is that profitability is not a key factor that stimulates payment of dividend by brewery firms in Nigeria. This result is not in consonance with the findings of Chijoke-Mgbame and Mgbame (2009); Arif and Akbar (2013); Magambo, et al., (2016) who reported a positive and significant relationship between profitability and payment of dividend in their studies. This result is, however, in tandem with the findings of Labhane and Das (2015) who reported an insignificant relationship between profitability and dividend payout.

Additionally, business size matters and has a favourable impact on the dividend distribution of Nigerian brewing companies that are listed. It follows that larger brewery companies pay

dividends at a higher rate than smaller ones. This is partially due to the fact that they have higher cash flows, are more stable, and can more easily acquire money to finance expansion from the capital market and banking industry. Also, firms with well managed large size tend to explicitly possess economies of scale efficiency in terms of managerial and technical capability and usually enhance performance. Thus, investors should factor in size in determining dividend payout for brewery firms in Nigeria. This finding is in line with that of Al-Malkawi (2007); Rafique (2012) and Hortono and Matusin (2020) who reported a significant positive relationship between firm size and dividend payout. In contrast, the result is not in support with Chijoke—Mgbame and Mgbame (2009); and Okoro et al., (2018) who found a significant and negative relationship between firm size and dividend payout.

Furthermore, the result reveals that firm age (AGE) exerts a non-significant positive influence on dividend payout of listed brewery firms in Nigeria. This means that a unit increase in firm age gives rise to 0.782319 insignificant increases in dividend payout making it not to be in tandem with the conclusion of Javid (2014), in the literature. Thus, age of firm seems not to be a critical factor the influences brewery firms' payment of dividend in Nigeria.

The empirical results also gave indications that LEV exerts a significant direct effect on payout of dividend. This means that a unit increase in leverage gives rise to 0.669233 significant increases in dividend payout. Thus, leverage seems to be a key factor that meaningfully influences dividend payout of brewery firms in Nigeria. The finding corroborates the results of Ahmed and Javid (2009) and Ai-Shubiri (2011), who found a significant linkage between leverage and dividend payout. The significant and positive linkages between leverage and dividend payout found in this study are not in consonance with the findings of Rafique (2012); Okoro et al., (2018) and Pinem et al., (2020).

CONCLUSION AND RECOMMENDATIONS

In this study, we investigate the determinants of dividend payout of quoted brewery firms in Nigeria. This was embarked upon against the strong financial performance of this sector in the Nigerian Exchange Group. Audited financial reports of the chosen brewery firms, panel data on dividend payout, profitability, firm size, firm age and leverage were collected from 2014 to 2022. The panel least squares was employed in the analysis. The study's overall conclusions appear to support the notion that, although profitability and firm age were observed not as factors influencing the dividend payout of Nigerian quoted brewery firms, firm size and leverage are.

Empirical results of this research propose the following policy suggestions for further action:

- Investors who prefer regular bonus payment should invest in large and highly leveraged brewery firms since firm size and leverage play a pivotal role in dividend payout of brewery firms in Nigeria.
- Also, investors ought not to be convinced by the firms' age and profitability as it does not greatly influence the dividend payout decision of listed brewery firms in Nigeria. Furthermore, investors who prefer regular dividend payment should not focus on profitable and old brewery firms.

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- In addition, managers may establish a suitable dividend policy for their company by taking into account the important factors that influence dividend payment decisions.

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