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Influences of Dividend Policy on Performance Indicators in Enhancing Firm Performance Growth of Listed Non-Financial Companies on the Ghana Stock Exchange

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Abstract
Dividend policy as one of the key financial decisions by management remains controversial to both corporate management, stakeholders and academia. Inconclusive findings on impact of dividend policy on corporate financial performance persists. Whilst previous studies are industry-specific, this study considers the topic from multi-industry non-financial companies' perspective in emerging markets. It is therefore relevant to understand whether the propositions and conclusions reached on this rather controversial and significant dividend issue is applicable to developing countries and their nascent stock market predictions. Regression model was conducted on 2015-2020 financial data of 14 listed non-financial companies to determine the strength of any relationship between dividend policy, profitability, operating efficiency and performance. The results indicated positive relationships between the variables; especially, dividend payout and performance growth is statistically significant (R=0.745; *p*-value=0.0045). The findings confirm that dividend policy affects variability in firm profitability and its relevance in all markets; hence, dividend-payout deserves management decision primacy.
Keywords: Dividend policy, Investment decisions, GHSE, Non-financial, Shareholders' wealth
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1. Introduction

Dividend policy is one of the financial variables that received numerous financial analysts and academia attention. In spite of the plethora of findings on the impact of a firm's dividend policy on its future financial performance, extant literature inconclusive with the results churned (Mamun, Hoque & Mamun, 2013; Dang, Vu, Ngo, & Hoang, 2021; Nguyen, Pham, Doan, Ta, Nguyen, & Truong, 2021). This, according to Frankfurter whose argument supports Black's dividend dilemma assertions (Frankfurter, 1999) and which remains an issue of prime concern, it is because upon all the comprehensive research on dividend policy, corporate managers and financial analysts still face the dividend conundrum with pieces of information that does not seem to have standardized fit.

The primary interest of the contemporary investor is periodic cash flow and capital growth of the investment. This makes dividends a critical consideration for stock investors (Nissim & Ziv, 2001) as it determines the net wealth of the investor (Lintner, 1956; Dang *et al.,* 2021). In this view, the decision to pay or not to pay dividend is key communication management makes to the firm's equity investors. As a result, dividend policy becomes a significant component of corporate policies, expectation of investors. Dividends are the regular inflows to the stockholder into perpetuity, the current income for investing in stocks, and therefore a significant component of return for risk and in consideration for portfolio (Ross, Westerfield & Jaffe, 2020). Previous authors and financial literature identified various factors that contribute to management decisions on paying dividends and the mode of paying such. These include current and future financial needs of the firm, available reinvestment opportunities, firm size, shareholder expectations, earning stability, access to capital markets, liquidity position, legal rules, and debt restrictions (Mawutor & Kemebradikemor, 2015; Saxena, 1999), among others.

Payment of dividends is a piece of welcome news to shareholders, but the information or the policy communicates much about the firm's profitability and signals to analyst and prospective investors what the firm's future prospects look like. This is important because the level of dividend influences the market performance of the corporation's stock (Mamun, Hoque & Mamun, 2013; Dang *et al.,* 2021), and hence the value of investment (Lintner, 1956).

Creating value and enhancing or maximizing shareholders' wealth remains the overarching objective of all

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financial management decisions, a decision influenced by investment, financing, and cash management propelled by sales growth and profitability (Azhagaiah & Priya, 2008; Nguyen et al., 2021). Thus, a firm's current performance and future predictions are attributable to improvement in shareholders' wealth fueled by earning capacity which factors into the decision to pay or not to pay dividends. Baker and Powell posit the influence of firm dividend policy on stock price, as a signal effect, and valuation of the firm from analysts' perspective as well as the wealth of shareholders (Baker & Powell, 1999).

A dividend record is one essential information required for listing on the Ghana Stock Exchange (GHSE) (2009). Thus, dividend payment remains a watchful critical consideration for all stakeholders and a determinant of other financial policies (Alli, Khan & Ramirez, 1993). As a crucial decision, dividend payment decisions spell the flow of funds to investors periodically and how much to retain for reinvestment in prospects or investment opportunities available to the firm (Mawutor & Kemebradikemor, 2015; Saxena, 1999) for reinvestment. Firms' investments would therefore determine its future earnings and the ability to declare dividends in the future. Both factors influence market response and hence the investors expected rate of return; cost of capital (Foong & Zakaria, 2007). This emphasizes dividend policy as a considered financial decision management encounter because it has profound implications both for share price performance and returns to investors (Baker & Powell, 1999), as it affects the internal growth rate of the corporation. Based on its crucial role in determining the future performance (Nguyen et al., 2021) and wealth enhancing variable, Frankfurter aptly concluded and emphasized the same views of Frankfurter that the dividend policy and its influences on corporate financial decisions remains a dilemma and a challenging discussion in contemporary corporate finance literature (Frankfurter, 1999).

Previous literature, however, gave differing views on dividend payment. Dhanani's 2005 survey of management views and attitude towards dividend policy reported that dividend policy enhances the market value of corporate stocks. Mizuno also emphasized that if corporations do not have any suitable value-enhancing projects, their earnings must be returned to the shareholders, above expectations (Mizuno, 2007). On the contrary, other authors, including Farsio, Geary, and Moser hold that most studies relating future earnings to dividends are misleading in scope (Farsio, Geary & Moser, 2004). The authors concluded that there is no direct relationship between the current dividend and the future profitability of a firm.

Over the last three decades, various studies on dividend policy, including (Arnott & Asness, 2003; Nissim & Ziv, 2001), could not resolve the complexities of the topic in corporate finance. Similarly, theories purported to have explained the relevance of dividend policy and its impact on firm value could not produce any consensus (Frankfurter, 1999; Pandey, 2003). As a result, authors, Amidu (2007), Lie (2005), and Howatt, Zuber, Gandar & Lamb disagree on the relationship between dividend payout and firm performance (Howatt *et al*., 2009). Amidu concluded that dividend policy affects a firm's future performance as measured by its profitability. The author found a positively significant relationship between firm profitability and dividend policy among listed companies on the GSE (Amidu, 2007). Howatt and the co-authors further linked the dividend influences to earnings (Howatt, *et al.*, 2009). The author contends that changes in dividends paid induce changes in future earnings per share. Thus, Howard confirms Bar-Yosef and Kolodny assertion that a percentage point increase in dividend turns to reduce risk by the same measure, which is necessary if this positive change leads to financing considerations and optimum financial leverage (see Bar-Yosef & Kolodny, 1976).

In contrast, authors like Lie argue that there is no broad evidence to confirm that dividend-paying firms experience performance improvements than non-dividend paying ones (Lie, 2005). However, most of the studies were conducted in large economies with vibrant exchange markets. Researchers are now looking at the emerging economies and verify the applicability of the existing theories in these nascent economies. Arnott & Asness, Farsio et al., and Nissim & Ziv conducted their studies in developing countries (Arnott & Asness, 2003; Farsio, Geary & Moser, 2004; Nissim & Ziv, 2001; Dang et al., 2021). Similarly, Mawutor and Kemebradikemor studied the dividend policy of banks listed on the Ghana Stock Exchange (GHSE) and pronounced a positive relationship between dividend payment and bank performance (see Mawutor & Kemebradikemor, 2015; Nguyen et al., 2021). In both cases, the studies were industry-specific. This study looks at multiple industry listed non-financial companies on the GHSE to establish the relationship between corporate dividend payout and future corporate profitability in Ghana. Based on this assertion, this paper seeks to investigate the influence of dividend policy on firm profitability indicators in enhancing performance growth of listed non-financial companies on the GHSE.

In order to explore the relationship between firm dividend policy and its future profitability related to revenue and operational efficiencies of the sample companies, the cardinal question the study seeks to answer is: can a firm's future profitability be attributed to its dividend payout policy; and to what extent, if any? Thus, the cardinal objective of establishing the relationship between firm dividend policy and its profitability remains relevant based on the specific nature and economic environment of the GHSE and Ghanaian economy respectively (Ghana Stock Exchange, 2013).

Thus, this study focuses on dividend policy represented by dividend payout and corporate performance proxy profitability (return on assets (ROA), revenue, and operating efficiency. Fourteen non-financial companies listed on the Ghana Stock Exchange (GHSE) are sampled, and data spanning the period 2015-2020 was used in the study.

The rest of the paper is organized as follows: review of literature is presented in the next section. This is followed by methodology, data analysis and findings and discussion in the next three subsequent sections. The summary and conclusions reached on the findings concludes the paper.

2. Literature and hypothesis formulation

Relevant literature is divided into theoretical perspective and empirical perspective. From the theoretical perspective, this study emphasized signaling theory and agency theories at its foundation. In signaling theory, management position as custodian of corporate information depriving the market, current, and potential investors of relevant information for investment decision is termed information asymmetry. When firms pay dividends, they directly communicate to the market and all stakeholders of good earnings and brighter prospects (Amidu, 2007). Kale and Noe noted that dividends signal the stability of a firm's future cash flows (Kale & Noe, 1990), while Brigham submitted that dividends provide perhaps the best and most reliable signal (Brigham, 1995). When dividends are declared, the information attracts potential investors, increases the outstanding shares, given the book value and reduces the market price of stock. Dividend payout ratio represents the return one listed company gives to its shareholders. It is denominated by a company's probability, while taking firm size, numbers of lines of business in a firm, agency cost, and degree of free cash available into consideration (Holder, Langrehr & Hexter, 1998). Besides, Saxena maintains that the percentage of common stocks held by insiders and the number of common stockholders in the market will also impact the dividend payout ratio (Saxena, 1999). Therefore, the dividend payout ratio can comprehensively present a company's profitability with the consideration of the long-term financial situation (Nguyen *et al.,* 2021 Nguyen *et al.,* 2021 Nguyen *et al.,* 2021). Brigham and Agyei and Marfo-Yiadom submit that dividends provide perhaps the best and most reliable signal (Brigham, 1995; Agyei & Marfo-Yiadom, 2011) (see also, Ambarwati, 2020). According to them, an increase in dividend signals management's confidence that future earnings will be strong enough to support new and higher dividends and vice versa. Similarly, Kale and Noe suggest that dividend acts as a signal of the stability of the firm's future cash flows (Kale & Noe, 1990). When management acts to falsify the accounting data, a wrong signal is thus sent to the market, and current and potential investors are misled.

On the contrary, the agency theory enables management to raise equity capital through the stock market due to dividend payment; as dividends are paid, the firm's ability to raise additional capital in the equity market increases. This reduces over-investment of free cash flows and prevents shareholder activism (Richardson, 2006) and; it exposes the firm to stock market scrutiny, monitoring and hence reduces its agency costs. Thus, Kale and Noe's assertion that dividends signal the stability of a firm's future cash flows (Kale & Noe, 1990) and Brigham's submission that dividends provide perhaps the most reliable signal are valid (Brigham, 1995). According to the authors, an increase in dividend signals and increases shareholder confidence in management. Agyei and Marfo-Yiadom contend that future earnings will be strong enough to support new and higher dividends and vice versa when dividends are paid (Agyei & Marfo-Yiadom, 2011). These assertions remind us that one decision that has pervasive impact on corporate success is its financial decision. Literature taught that corporate financial management must answer three critical questions that devolve into making three critical decisions for the firm if its shareholders' overall objective should be achieved. A finance decision as where do we get funding or otherwise known as capital structure (mix) decision, and profit distribution (dividend policy) which is the fourth decision in finance literature after working capital management decisions (Ross, Westerfield & Jaffe, 2020). Dividend policy decision [net income x (1-retention ratio)] is significant because it determines the proportion of earnings available to common stockholders that flows to them and what is left for reinvestment (*ibid.*). Even though some authors asserted that dividend declarations do not help to improve firm value (Mamun, Hoque & Mamun, 2013), several yet inconclusive theories exist on the relevance of dividend policy to corporations.

Empirically, studies to fully appreciate the relevance of dividend policy have lingered for decades. Until now, no universally agreed explanation for corporate dividend-paying behavior was established (see for example Frankfurter, 1999; Abdulkadir, Abdullah & Wong, 2016). Several pieces of research on the dividend dynamics and determinants of dividend policy flood corporate finance literature but little standardized observed dividend behavior of firms, in both the developed world and emerging markets (Mawutor & Kemebradikemor, 2015; Abdulkadir, Abdullah & Wong, 2016) are on record. The conclusion reached by Mawutor and Kemebradikemor on their analysis of dividend policy and bank profitability indicated that even though there is a strong correlation between dividend payment and profitability, the banks' decision to pay dividends is more influenced by factors other than profitability (Mawutor & Kemebradikemor, 2015). Per regression analysis, the authors identified liquidity, growth, other investments, control, legal requirements, shareholders' desires, size of the firm, and other management decisions as to the compelling factors for dividend payment. A study of the extant literature confirmed that the critical determinants of dividend decisions include liquidity, after-tax earnings of the firm, cash flow considerations, future earnings, past dividend practices, returns on investment, legal requirements, growth prospects, inflation, and interest rates (see also Abdulkadir, Abdullah & Wong, 2016). However, Brigham and Foong, Zakaria and Tan emphasized that a firm's dividend policy is a major determinant of firms' performance

(Brigham, 1995; Foong & Zakaria, 2007; Nguyen *et al.,* 2021) because investments made by firms influence the future earnings and future dividends potential (Miller & Modigliani, 1961; Bar-Yosef & Kolodny, 1976). The study results of Amidu showed a positive and significant relationship between profitability ratios: return on total assets (ROA), return on equity (ROE); growth in sales and dividend policy (DP) to indicate that dividend policy does affect the performance of listed companies on the GSE (Amidu, 2007). Hence, Amidu concluded that dividend payout and firm profitability have statistically strong relationship (*ibid*). This confirms the assertions of Foong, *et al.* that when a firm has the policy to pay dividends, its profitability is influenced (Foong & Zakaria, 2007). A similar outcome was produced by (Howatt, *et al.*, 2009) when the authors posit a link between dividends payout changes in future earnings per share and Bar-Yosef and Kolodny in their view that increases in dividend reduces risk through increase earnings and reinvestment (Bar-Yosef & Kolodny, 1976). Ambarwati (2020) explores the effect of financial variables on twelve manufacturing companies in Indonesia, and find out that liquidity, asset size, and dividend payout have a significant negative impact on the beta of manufacturing companies. The researcher analyzes that when investors perceive low liquidity, low asset size, or low dividend payout, they interpret it as systematic risk is taking a large proportion in total investment risks. As a result, asset growth shows a positive correlation with dividend since investors tend to be rational when pricing an asset; of course, dividend per share is a corporate value measurement metric.

In addition, Nissim and Ziv posit that dividend increases depend on future increases in earnings; every two years following the first dividend change (Nissim & Ziv, 2001). Foong et al. corroborated this finding when they found evidence to support the view that investors positively respond to dividend changes (Foong & Zakaria, 2007). Chiou and Su's study integrates CAPM, Cobb-Douglas function, and clean surplus relation to find out the determinants of beta. Their results suggested that for a firm with positive prior-year earnings, current-year sales growth and positive combined effect of its current book value, dividend, and earnings on stock price, the sensitivity of the percentage change in earnings relative to that in sales will have a positive effect on systematic risk (Chiou & Su, 2007). If book value, earnings on stock price (Dang et al., 2021) and dividend exert positive effects on stock price, then the dividend exerts positive effects on systematic risk, and vice versa (ibid). Also, Fama and Babiak found a trend relation to annual dividends and earnings, which re-echoed the view that dividend-paying firms increase their dividend only when management is relatively confident that the higher payments can continue the future prospects of the firm (Fama & Babiak, 1968). Similarly, M'rabet and Boujjat applied panel data regression model to annual reports of sampled quoted firms in Morocco and found a strong positive relationship between dividend policy and financial performance (M'rabet & Boujjat, 2016; Nguyen et al., 2021). The authors thus herald dividend policy as an essential factor in the financial performance of corporate firms.

Notwithstanding this, Farsio et al. observe that significantly long-run relationship between dividends and future earnings does not exist (Farsio, Geary & Moser, 2004). They asserted a negative relationship between dividends and profitability in the long run. The authors concluded that studies supporting a positive relationship between dividend and firm profitability is short-termism and misleading to investors. The authors proved three scenarios that render the long-term relationship of dividends and future earnings insignificant: (1) increase in dividends reduces funds for reinvestment, (2) payment of current dividend deprives firms of funds to undertake viable sumptuous projects, and (3) lower future profitability. The position of the Farsio et al. supports previous authors in whose view the signaling effect of dividend policy does ensure high level of investment consistently (Lintner, 1956; Ozuomba, Anichebe & Okoye, 2016; Saxena, 1999). The authors further indicated that any contractual impact on information asymmetry which goes with dividend declaration for profiteering motive could eliminate time inconsistency and investment inefficiency thereby making companies achieve less than optimum investment, and sometimes no trading in the stocks. Enyan stated that some firms pay low or no dividend because management is optimistic about the firm's future and wishes to increase its retained earnings for future expansion (Enyan, 2009; Nguyen *et al.,* 2021). This assertion relates the operational efficiency of the firm. Assets management (assets turnover) indicates a company's ability to efficiently utilize its assets to acquire increased sales volume. This accounting variable is significant for it effectively get the turnover ratio based on the calculation of indicated assets (Agyei & Marfo-Yiadom, 2011). Based on assets management, investors can analyze a company's capability to manage its current assets to generate sales to increase the company's profit in the future (Frankfurter, 1999; Lintner, 1956; Ozuomba, Anichebe & Okoye, 2016).

Even though all these uncertainties about the relevance of dividend payments exist, corporate finance literature and wisdom conjectured that a properly managed dividend policy is vital to shareholders because it can affect share prices and shareholder's wealth (Saxena, 1999); essentially two key issues relating to return and capital gain (Azhagaiah & Priya, 2008). Market value of equity indicates the value of a company to the shareholders. Each financial criterion used for evaluating company performance relates to stockholders' wealth. This financial information is widely used for investors to analyze the intrinsic value of a company to its shareholders. Ozuomba, Anichebe, and Okoye who applied Anova analysis to 10 quoted firms on the Nigeria stock exchange, found that dividend influences shareholders' wealth of limited public companies (Ozuomba, Anichebe & Okoye, 2016; Dang *et al.,* 2021). The argument is sound considering the assumptions that (1) there is no tax disadvantage to an investor

to receiving dividends, and (2) that firms can raise funds in capital markets for new investments without bearing high issuance costs. The second school of thought proponents feels that dividends are bad for the average stockholder because of their tax disadvantage, resulting in a lower return. Based on shareholder profiling, dividends are just good because stockholders like them. Thus, despite comprehensive research on dividends, corporate managers and financial analysts still face the dividend enigma with pieces that just do not seem to fit (Frankfurter, 1999).

Given the specific objective and questions this study seeks to explore, the fundamental study concept which devolves to the hypotheses to be tested is that corporate performance is a function of dividend payout, annual revenue and operating efficiency; stated as:

$$P_f = f(D_p, R, O_e) \quad (1)$$

where P_f denotes future performance, proxy profitability; D_p denoting dividend payout and O_e stated as the proxy for firm operating efficiency.

Derived from the literature review, the concept and study objectives, and to answer the above questions, the paper hypothesizes, as the basis for enquiry, the following: that;

H_1: dividend payout policy, revenue and operating efficiency directly impacts firm performance
H_2: dividend payout policy directly relates to firm profitability.
H_3: firm revenue directly relates to its profitability.
H_4: firm operating efficiency directly relates to firm profitability.

3. Methodology

The study relies on secondary sources for data. Data for the current study is drawn on 14 non-financial institutions listed on GHSE from S&P Global Market Intelligence. A six-year financial record of these companies from multiple sectors, with complete and up-to-date financial reports, is utilized. That each industry is affected by industry-specific regulations and other environmental factors, we assume no corporate environmental factors exist or does have significant effect to render the dataset invalid. This sample size, though small, is based on the size of the GHSE[1]. About half of the listed non-financial institutions have limited financial data[2] and could not be used for this study. Two statistical methods were applied to the data: a correlation to measure the relationship between the dependent and the independent variables and multiple regression analysis to determine the strength of the any relationship between the variables; using XLStat. Prior to these, descriptive analysis and normality tests (normality probability test and Shapiro-Wilk test) were conducted.

The variables of major concern for this study are stated and defined as follows: (i) the dependent variable: future performance (proxy Pf) measures the after-tax profit divided by total assets (RoA) of each company in the sample. These values were computed based on S&P Market Intelligence metrics; and the (ii) the independent variable(s): dividend payout (proxy Dp), was measured by the proportion of after-tax profit available to common stockholders (1-RE), where retained earnings (RE) is the earnings retained per period (normally for reinvestment and for future opportunities). We control for sales revenue (R) growth over the relevant period and measured as the difference between the current and previous net sales divided by the previous net sales; and operating efficiency (O_e) which we determined as a proportion of sales revenue to average total assets (T_a).

4. Data and data analysis

Secondary data drawn on the sampled companies was used to study the variables modeled for this study. The data for the relevant dependent and independent variables was obtained from the S&P Capital IQ database. Annual growth ratios (g) for revenue based on the S&P metrics were directly taken from the database. These year-on-year growth rates were converted into annual growth factors in Excel using the relation:

$$x_i = 1 + 0.01*g \quad (2)$$

where x_i is the annual growth factor for a particular year and g representing the annual growth rate. Since arithmetic mean is not appropriate to measure mean growth rate and will not provide a good result for the mean growth rate, the geometric mean relation was applied. The geometric mean of the annual growth rate of each unit of observations was then computed to derive a geometric mean growth value for sampled institutions using the model:

$$\overline{x_g} = \sqrt[n]{(x_1)(x_2)(x_3).....(x_n)} \quad (3)$$

where, $\bar{x}_g$ is the geometric mean representing the mean annual growth rate. The individual variables' geometric mean was computed based on each variable's annual growth factor as determined by 1+0.01*g; with g being the annual growth rate for observation. n = the number of the period and x_i = the annual growth rates.

[1] The GHSE has 37 listed firms out of which 14 are financial institutions. The financial institutions are not included because they have their specific industry regulations and formula for determining financial ratios.
[2] 13 other firms only have proprietary data which means their data is not publicly available. Using incomplete data from these sources is likely to create some misrepresentation and as such these companies were not selected.

A descriptive analysis to provide a comprehensive understanding of the sample data profile was conducted as the first-step test on the data with 336 observations in total. The study also considered normality test (Figure 1) to ascertain the nature of the distribution of the data. The data was plotted against a theoretical normal distribution to ascertain whether the points would form an approximate straight line. Looking at the distribution of the dataset used for this study it is obvious that the data is close to normally distributed. Many factors among which is the limited nature of the data used due to exchange issues already discussed may be accountable for the normality or shape of the distribution. Also, it is necessary indicate that the sample data contains outliers; removing the affected data could only lead to other data values assuming outliers, and lead to misinterpretation of the sample results. In this regard, the presence of outliers in the data, resulting in less normality, was ignored.

- **Insert Figure 1 Here**

A further test to confirm the normality of the data was conducted using the Shapiro-Wilk Test. The test result indicated that while data of other variables, P_f, O_e and R, are normally distributed, data on the cardinal variable for this study, dividend payout (D_p) is not. W-stat of 0.660 is far below the confidence co-efficient of 0.95 hence the data miss the normality probability for both O_e and D_p; but practically for the D_p. This is further confirmed by DA-stat with a negative *p*-value at 0.00003; a *p*-value expected to be greater than 0.05 to pass the normality test. Increasing the data size could produce a better result; this is practically the cause of less than normal distribution produced by the D_p and because of the limited size of the sample data. This limitation is obviously due to the size of the GHSE which necessitated unavailability of large data for this analysis. Even though the normality showed that the data is normally distributed this was largely due to the large influence of the normality of operating efficiency (O_e) and Revenue (ROA) effects. Table 1 presents the results of Shapiro-Wilk Tests.

- **Insert Table 1 Here!**

A multiple regression analysis was performed to ascertain the relationship between dividend and profitability; and the extent of the influence of dividend payout on profitability. The model to estimate the impact of the independent and control variables on the dependent variable is constructed as:

$$P_f = \beta_0 + \beta_1 D_p + \beta_2 R + \beta_3 O_e + \mu \quad (4)$$

with β_0, β_1, β_2, and β_3 representing the regression co-efficient for the intercept, dividend payout, sales revenue, and operating efficiency, respectively; and μ as the unexplained variables or extraneous variables. The independent variables: dividend payout, revenue and operating efficiency remained as defined in the earlier paragraphs.

5. Findings and discussion

Descriptive analysis serves as a cornerstone statistical method to study a sample's profile and it provides researchers with objective and comprehensive information about the dataset. The summarized results of the descriptive analysis are presented in Table 2. The results comprise the selected variables and their values 336 observations for the 14(N) valid non-financial companies drawn for the GHSE. The results provided include: the average number, standard deviation, minimum and maximum values of each variable used. The standard deviation of 0.197 represents dividend payout, the largest volatility recorded by the data. The same variable shows lesser normality among the other variables studied.

- **Insert Table 2 Here!**

The summarized correlation and regression Table 3 provides the relationships between the dependent and the independent variables. The analyzed result shows that profitability (P_f) is positively related to all the relevant variables for this study. Dividend payout (D_p), the independent variable of major concern, correlates positively at 0.745 or 74.5% with profitability at 0.05 significant level. Revenue (R) and operating efficiency (O_e) moderately correlated with 0.330 (33%) and 0.440 (44%) at 0.05 significant level; respectively.

- **Insert Table 3 Here**

Further strength of the relationship between the variables was displayed by the collinearity of the variables examined. There is no multicollinearity found as none of the values produced by analysis exceed the acceptable confidence co-efficient at 0.95, and all those variables produced as less than then threshold ≤ 0.80. A strong correlation existed between firm performance and the relevant variables. The relationship between O_e and R is significant at 0.05 (0.049). Dividends have the highest correlation coefficient at 0.745 indicating and supporting its influence to the study and in moderating the operational efficiency and hence revenue generation, which is significant at 0.049. This is in line with assertions future earnings are affected by dividend policy (retained ratio) (see Fama & Babiak, 1968; M'rabet & Boujjat, 2016; Enyan, 2009; Amidu, 2007).

The regression analysis tests the impact of dividend payout on the profitability of non-financial companies quoted on the GHSE. Based on the model formulated for this study, the results are provided in Table 4. The result indicated the combined variability impact of D_p, R, and O_e in predicting profitability at 69.4% ($R^2 = 0.694$). This explains that 69.4% of the variability in profitability year-on-year can be attributed to the independent variables tested in the model; that is, dividend payout, revenue, and operating efficiency. Impliedly, the results show that

extraneous factors not captured in the model may cause the remaining 30.6% variability in profitability. Indeed, such possible factors could be many and vary to include endogenous and exogenous variables (Mawutor & Kemebradikemor, 2015). The authors identified liquidity, growth, other investments, control, legal requirements, shareholders' desires, size of the firm, and other management decisions as to the compelling factors for dividend payment. Other literature added after-tax earnings of the firm, cash flow considerations, future earnings, past dividend practices, returns on investment, legal requirements, growth prospects, inflation, and interest rates (Abdulkadir, Abdullah & Wong, 2016).

- **Insert Table 4 Here!**

Additionally, the model summary further indicated profitability as the predictor variable contributing most to this dependent variable variability. With the chosen significance level at 0.05, the ANOVA F-*value* of 7.565 with a corresponding *p-value* of 0.006 indicated how statistically significant the combined variables (at 5% significance level) are to P_f. Nevertheless, given the R^2 at 0.694, the extraneous variables not considered by the model for the study need to be studied to detect their impact on profitability (Mawutor & Kemebradikemor, 2015; Abdulkadir, Abdullah & Wong, 2016). The analysis showed that O_e and R are not significant and hence other factors (μ) complement the D_p variable to impact firm future performance. By controlling for operating efficiency (O_e) and return on assets (ROA) (R), the strength of the relationship between future performance (P_f) and dividend payout (D_p) was tested (Table 5).

The output indicated that D_p accounts for 55.5% of increases in firm future performance (R^2 = 0.555; significant at 0.002). This confirms the positions of Brigham and Foong, Zakaria and Tan (see also, Miller & Modigliani, 1961) and implies that management decisions regarding whether to pay dividend or not makes a huge impact on the operations and the ultimate performance of the firm in the future (Brigham, 1995).

Based on the summarized results and outcome of the study, the test hypotheses of this study are concluded as:

i. all the directional hypotheses constructed for the study are accepted.
ii. Hypotheses H_1: dividend payout policy, revenue and operating efficiency directly impacts firm performance is accepted based on the multiple regression analysis conducted on the data obtained on the relevant variables; H_2: dividend payout policy directly relates to firm profitability; H_3: that firm revenue directly relates to its profitability; and H_4: firm operating efficiency directly relates to firm profitability are all accepted according to the correlation results. The linear relationship between firm future performance and the variables studied in this study is therefore summarized as:

$$P_f = 1.019 + 1.770D_p + 0.195R + 0.045O_e + \mu \quad (5)$$

The higher regression co-efficient recorded by D_p reveals the relevance and impact of dividend decision on the future performance and financial sustainability of corporate firms (Azhagaiah & Priya, 2008; Alli, Khan & Ramirez, 1993; Mawutor & Kemebradikemor, 2015) in the specific jurisdiction of the study (Brigham, 1995; Foong & Zakaria, 2007) (see also, Miller & Modigliani, 1961; Bar-Yosef & Kolodny, 1976). To confirm this observation, testing for D_p alone results in a summarized regression econometric equation which indicate that 22% of firm performance results could be attributed to dividend decisions made. (See Table 5 below).

- **Insert Table 5 Here!**

The resultant final equation therefore reveals that dividend indeed contributes to improvement in performance growth indicators and hence enhances firm performance growth.

$$P_f = 0.797 + 0.22D_p \quad (6)$$

6. Summary and conclusion

This study examines the influence between dividend policy and corporate performance indicators in impacting the future performance among listed non-financial companies on the GHSE. Fourteen companies quoted on the GHSE were sampled, and data gathered was correlated to determine relationships, if any, while a regression model was developed and used to ascertain the impact of dividend policy on profitability. Both results indicated positive relationships between profitability and dividend payout, revenue, and operating efficiency. Dividend policy strongly correlated with current profitability and was statistically significant (Azhagaiah & Priya, 2008; Amidu, 2007), whilst operating efficiency and revenues showed moderate correlations. This implies that corporate decisions on dividend payment can result in a future increase in the company's financial performance (Foong & Zakaria, 2007; Miller & Modigliani, 1961; Bar-Yosef & Kolodny, 1976). All the independent variables collectively predicted about 70% variability in profitability to indicate their extent in influencing the firm's future profitability. Based on the results, and especially the statistically significance of dividend policy (payout) on profitability (R=0.745; *p-value* = 0.0045), this study confirms and supports the position of (Fama & Babiak, 1968; Farsio, Geary & Moser, 2004; Enyan, 2009; Amidu, 2007) and others who asserted positive influence on dividend payout on earnings of the corporation (Miller & Modigliani, 1961). It is therefore suggested that corporate management prioritizes dividend policy and adopt a dividend payout rate that best addresses investors' long-run interest.

Notwithstanding this conclusion and suggestion, it is appropriate to state that the size of the GHSE could not help for a larger sample size as may be expected. Also, the sampling horizon is equally short because of the relatively nascent nature of the GHSE; and the quantum of companies with limited reporting. However, these shortcomings did not significantly affect the results, which is in line with the findings of Azhagaiah & Priya (2008) and Ozuomba, Anichebe, and Okoye who applied Anova analysis to 10 quoted firms on the Nigeria stock exchange and found dividend influences shareholders' wealth of limited public companies (Ozuomba, Anichebe & Okoye, 2016, Dang *et al.,* 2021). Finally, the findings indicated some extraneous variables that do influence variability in profitability. It will be of interest to examine such variables to determine the extent of their impact on firms' profitability. Future considerations regarding dividend policy influences on corporate performance may need to exclude the less significant variables used in this study and bring instead other variables such corporate governance because effective corporate governance practices in most emerging and developing economies remains just a policy; with minimal attentive implementation.

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Tables & Figures

Table 1: Shapiro-Wilk test and d'Agostino-Pearson

Shapiro-Wilk Test

	Pf	*Oe*	*Dp*	*R*
W-stat	0.939449	0.84558	0.660485	0.948122
p-value	0.411305	0.019354	0.000148	0.531955
alpha	0.05	0.05	0.05	0.05
normal	yes	no	no	yes

d'Agostino-Pearson

DA-stat	0.466426	4.48859	20.82255	0.69724
p-value	0.791985	0.106002	3.01E-05	0.705661
alpha	0.05	0.05	0.05	0.05
normal	yes	yes	no	yes

Grubbs' Test

alpha	0.05
outlier	1.706035
G	5.2909
G-crit	3.000735
sig	yes

Table 2: Descriptive statistics

	P_f	O_e	D_p	R
Mean	1.03752	1.012713	1.116954	1.038913
Standard Deviation	0.056905	0.011636	0.197006	0.126266
Minimum	0.954523	1.001073	1.00000	0.788115
Maximum	1.159153	1.037548	1.706035	1.211829
Confidence Level(95.0%)	0.032856	0.006719	0.113748	0.072904

Table 3: Correlation for multicollinearity of the variables

	Pf	*Oe*	*Dp*	*R*
Pf	1	0.440321801	0.744825684	0.330210445
Oe	0.440321801	1	0.109045627	0.049826987**
Dp	0.744825684	0.109045627	1	0.315775375
R	0.330210445	0.049826987**	0.315775375	1

***2-tailed correlation at 0.05 significance level*

Table 4: Multiple regression analysis summary

Model	Dependent	Independent	R	p-value	R^2	F
		O_e	0.440*	0.067		
1	P_f	D_p	0.745**	0.0045***	0.694	7.565
		R	0.330*	0.602		(0.006)

****2-tailed correlation and regression at 0.05 sign. level*

Table 5: Regression for dividend payout

Model	Dependent	Independent	R	*p*-value	R^2	F
1	P_f	D_p	0.745	0.0022***	0.555	(0.0022)

****2-tailed correlation at 0.05 sign. level*

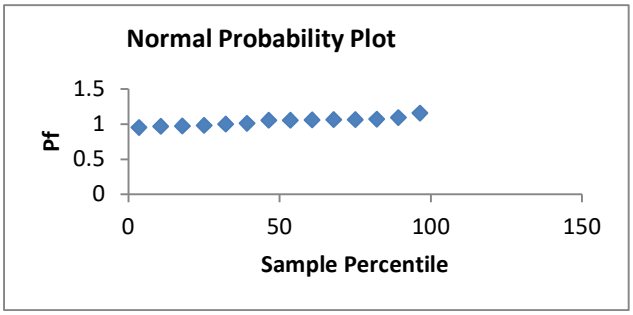

Figure 1: Normality test result