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# Contents

# EARNINGS IMPACT ON DIVIDEND PAYOUT DECISIONS ON THE NIGERIAN STOCK EXCHANGE

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## ABSTRACT

*The argument that the link between earnings and dividend has weakened stimulates the interest to re-examine the relationship. Based on a sample of 774 firm-year observations drawn from 126 non-financial firms listed on the Nigerian Stock Exchange, the study examined the effect of the main determinants of dividend payout as given in Lintner's model and other variables on dividend payout decisions in the Nigerian market. Both descriptive analysis and LOGIT regression analysis were employed in proffering answers to the research questions raised. Findings indicate strong support for Lintner's model as it was revealed that the level of earnings and past dividend are still paramount in dividend decision of firms listed on the exchange. Thus, the study concludes that the relationship between dividend and earnings has not weakened on the Nigerian Stock Exchange.*

## INTRODUCTION

Lintner (1956)'s seminal work indicates that past dividend and the current level of earnings are the main determinants of current dividends. Contrarily, Brav, Graham, Harvey, and Michaely (2005) documents about 50 years after Lintner's seminal work that the relationship between dividend and earnings have weakened. Thus, it becomes imperative to re-examine the relationship between the two.

Most prior studies on determinants of dividends focuses on factors influencing the amount of dividends paid. In line with this, prior studies that have examined the relationship between dividend and earnings focuses on whether earnings can influence the amount of dividends. However, Fama and French (2001) pioneered the stream of studies that examined dividend policy by focusing on the "decision to pay" as opposed to "how much to pay". Hence, it is uncertain whether the likelihood to pay or not to pay dividends is also explained by earnings. Studies that adopted the approach of Fama and French (2001) have majorly focused on developed markets. This calls for more research in emerging markets, particularly the African market setting.

The Nigerian stock market is regarded as the second largest market in West Africa in terms of market capitalization. However, anecdotal evidence in the market indicates that dividend payment has declined considerable. On one hand, decline in dividend payment in the market may be due to falling earnings in line with the notion of Lintner (1956) that earnings is the primary determinant of dividend. On the other hand, the level of earnings may not have any influence on the declining dividend in line with the notion of Brav et al. (2005) that the relationship between the two has weakened. Thus, the Nigerian market is an ideal laboratory to re-examine the relationship between earnings and dividends.

Based on the foregoing, the objective of the study is to examine the relationship between earnings and dividend by focusing on whether earnings affects the decision to pay or not to pay dividends. In achieving this objective, the study focuses on cash dividends as share repurchase option has not been widely embraced in the Nigerian market. After this introductory part, the next section reviews prior related studies. The paper then proceeds to discussing the data and methodology used, the empirical findings and conclusions derived.

## LITERATURE REVIEW

Lintner's (1956)'s model is one of the foremost attempt in explaining the relationship between earnings and dividend. The model indicates that managers consider the proportion of earnings to be paid out as dividends to set a target payout rate. Based on a survey study, Lintner (1956) documents that the main reason why managers alter their dividend level is the level of current net earnings. Thus, managers will not change dividend levels unless they are confident that earnings level can be sustained. The findings of Lintner (1956) shows further that any deficit in the earnings of firm is usually reflected in dividends distributed. Similarly, De Angelo and De Angelo (1990) argued that earnings problem is the most common reason why managers cut their dividend levels. Their empirical results also shows that firms will prefer to omit dividends in the current year rather than cut when they encounter decline in earnings in the previous year. DeAngelo, De Angelo, and Skinner (2004) also documents strong evidence for Lintner's model as findings revealed that dividend increases come from earnings increase. Their findings revealed further that dividends are concentrated among few firms and this is as a consequence of earnings concentration among the firms.

More recently, studies (Ameer, 2007; Chemmanur, He, Hu & Liu, 2010, Jasim & Hameeda, 2011; John & Muthusamy, 2010; Musa, 2009) have found earnings to be significantly and positively related to dividend payment. Contrarily, other studies (Adesola & Okwong, 2009; [illegible] 2010) documented significant and negative effect between earnings and dividend payout. These studies contend that as earnings increases, firms retain more for growth than pay out more dividends

Studies (Lintner, 1956; Brav et al., 2005) have also shown that dividend payout is affected by the stability of future earnings. Their findings based on survey indicates that the guarantee of stable future earnings is fundamental in influencing the firm's decision on dividend initiation or dividend increase. This finding has been established further as it is documented that firms that witness volatility in their earnings have difficulty in sustaining dividend payment and as such pay less or no dividends (Amidu & Abor, 2006; Pruitt & Gitman, 1991). Contrarily, firms that achieve earnings stability can have a better forecast of future earnings. Hence, they are more likely to pay out higher proportion of earnings as dividend.

As mentioned earlier, most of the studies discussed have focused on how earnings affect the amount of dividends paid. This study adopts another approach by focusing on the likelihood "to pay" or "not to pay". In line with this and based on preceding evidences documented in prior literatures, this study hypothesizes that firms with higher earnings are more likely to pay dividends while firms with higher earnings volatility are less likely to pay dividends.

## METHODOLOGY

The study is based on an unbalanced panel data set drawn from 126 non-financial firms listed on the Nigerian Stock Exchange between 2003 to 2012. Most countries subject financial firms to certain requirements and restrictions to ensure confidence and stability in the financial system. Ap Gwilym, Seaton, and Thomas (2004) noted that such regulatory issues may distort results. As such, this study exclude such firms. The final sample consists of 774 firm-year observations after removal of missing values and outliers. Firm-level data have been obtained from the annual reports and accounts of the listed firms as well as different issues of the factbook published by the Nigerian Stock Exchange. Descriptive analysis was employed in explaining the behaviour of the data and explaining the trend of earnings and dividend payout over the study period. In examining possible relationships that may exist, logistic regression was employed because the dependent variable is categorical in nature. Specifically, the study employs binomial logistic regression analysis as the dependent variable consists of just two categorical outcomes. The binomial LOGIT model is as specified below.

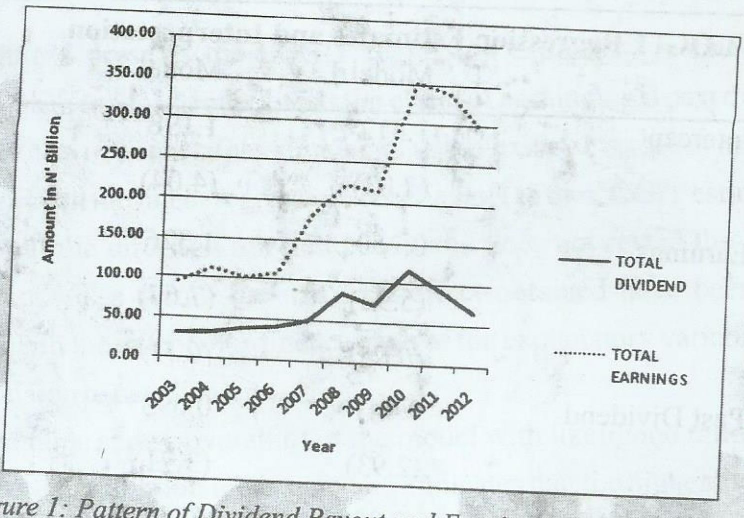


*Figure 1: Pattern of Dividend Payout and Earnings over Study Period*

***Descriptive Statistics of Variables in the LOGIT Regression Model***

Table 1 shows the descriptive statistics of variables in the LOGIT regression model. As indicated earlier, total number of observations is 774. The variable "earnings" was rescaled to avoid measurement unit error as recommended by Gujarati (2004)

**Table 1: Descriptive Statistics**

| Variables | Obs | Mean | Std. Dev | Min | Max |
|---|---|---|---|---|---|
| Dividend Decision | 774 | | | 0 | 1 |
| Earnings | 773 | 3.370 | 2.294 | -9.931 | 2.607 |
| Earnings Volatility | 773 | -0.963 | 1.983 | 0.008 | 9.856 |
| Dividend (t-1) | 774 | 0.585 | 1.648 | 0 | 12.93 |
| Firm Size | 774 | 4.748 | 1.259 | -43.17 | 75.02 |
| Investment Opportunities | 774 | 3.454 | 1.565 | -21.667 | 280 |

**Table 2: LOGIT Regression Estimates and Interpretation**

| | Model 1 | Model 2 |
|---|---|---|
| Intercept | 1.412*** | 1.198*** |
| | (7.03) | (4.04) |
| Earnings | 0.250*** | 1.326*** |
| | (5.92) | (7.67) |
| | *(0.05)* | *(0.11)* |
| Past Dividend | 0.441*** | 0.693*** |
| | (2.93) | (3.71) |
| | *(0.09)* | *(0.14)* |
| Earnings Variability | | -0.042*** |

| | | |
|---|---|---|
| | | (-2.97) |
| | | *(-0.35)* |
| Size | | 0.120 |
| | | (1.16) |
| | | *(0.05)* |
| Investment Opp. | | -0.043* |
| | | (-1.90) |
| | | *(-0.09)* |
| No. of observations | 774 | 774 |
| LR $X^2$ | 87.31*** | 120.12*** |

*significant at p<0.10; **significant at p<0.05; ***significant at p<0.01. z-stat are in 1st parentheses; marginal effects are in 2nd parentheses and in italics.

**Table 2** presents the LOGIT regression estimates. In line with Lintner (1956)'s model, Model 1 tests the effect of earnings and past dividend on the decision of firms to pay dividends while model 2 includes other variables. Unlike in the linear regression, coefficients of the LOGIT estimate will only reveal the direction of relationship and does not reveal the magnitude of effect. As a result, the marginal effect obtained have been included to explain the extent of influence each of the explanatory variable exert on the decision to pay dividend.

The table shows overall fit of the model with likelihood ratio $x^2$ significant at 1%. Results obtained in model 1 indicates that the higher the earnings and dividend paid in the previous year, the higher the likelihood to pay dividends. This finding supports Lintner's model where it is stated that current earnings and past dividend are the main determinants of dividend payout. Finding on earnings and past dividend are robust to the inclusion of more variables in the model as the two variables remained significant in the expanded model (model 2). Earnings volatility which shows negative and significant co-efficient in model 2 indicates that the higher the volatility of earnings, the lower the likelihood of firms to pay dividends. This confirms prior findings that stability of earnings is paramount in dividend decisions. Investment opportunities was also found to be significant with negative coefficient. Thus, firms are less likely to pay dividends when they have higher investment opportunities. Insignificant result obtained for size implies that the size of a firm does not necessarily influence its payout decisions. The marginal effects reported in parentheses and in italics indicates that among the explanatory variables that were found to be significant, earnings variability exert the highest influence on firm's decision to pay dividends while investment opportunities exert the least influence of payout decisions.

## CONCLUSION

The study re-examined the relationship between earnings and dividend on a sample of 774 companies listed on the exchange between year 2003 and 2012. Descriptive analysis of dividend and earnings pattern indicates that both move along the same path, although earnings increases was above dividend increases throughout the period. Findings from the LOGIT regression estimates revealed that earnings, past dividend, earnings variability, and investment opportunities influence the firm's decision to pay dividends. Based on the combined evidence from the descriptive analysis and regression estimates, the study concludes that there still exists a strong relationship between earnings and dividends.

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