



## Corporate Taxes, Agency Costs and Dividend Policy of Non-Financial Firms in Nigeria

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### Abstract

The study empirically examines the relationship between corporate taxes, agency costs and dividend policy of non-financial firms in Nigeria. Particular changes in dividend payout were considered based on the relative impacts of taxes, agency costs and transaction costs on firms. The study focuses on 48 active non-financial firms listed on the floor of the Nigerian Stock Exchange for a period of 8 years (2008 to 2015). These were drawn from the following ten (10) sectors: Agriculture, Automobile & Tyre, Breweries, Building and construction, Chemical and Paints, Conglomerates, Food/Beverages & Tobacco, Healthcare, Industrial/Domestic Products, and Oil and gas. Both statistical and econometric techniques were adopted for the analysis of the data as well as for investigating the hypotheses of the study. In particular, the Panel data technique was used in the estimation of the specified models. Given that fixed effects were shown to be suppressed in the relationships, the random effects approach was adopted for the empirical modeling and analysis of the equations. The results from the empirical analysis reveal that corporate tax liabilities of non-financial firms do not have significant impact on their dividend pay-out, suggesting that rising taxes may not affect how firms plan their dividend policy in the current period; agency costs in non-financial firms have negative impact on dividend policy of the firms; since only two of the agency cost variables were significant in the model, the results show that larger proportions of institutional and foreign ownership in non-financial firms leads to a fall in dividend pay-out by management; transaction costs do not have strong effects on dividend policy of the firms; a direct relationship exists between dividend pay-out and firm market value; dividend pay-out has strong positive impact on stock price or market value of the firms. Cash flow generally has a strong positive impact on dividend pay-out of the firms. Though, profits were insignificant in the dividend models, retained earnings consistently had positive coefficients in all the estimates in the study. The study recommends among others that tax implications involved in dividend policy formulation should be given adequate attention. Since taxes do not play effective role in dividend policy, the firms should focus more attention on ways of increasing earnings and improving market value for expanding dividends. More importantly, there should be more awareness of shareholders' preferences and influences in the determination of dividends rather than excessive focus on government-induced corporate tax influences.

**Key words:** Corporate Taxes, Agency Costs, Dividend Policy, Industrial Firms, Econometric and Statistical Methods

**JEL Classification:** H25, J54, G35, L6, C4

**Paper Classification:** Research Paper

## Introduction

The issue of dividend policy decision still remains a puzzle among financial experts across the globe till date. Financial experts are divided as to the best type of dividend policy firms are to adopt in order to fully maximize the shareholders' wealth. This prompted Black (1976) to conclude that the more dividend picture is examined the more it looks like a puzzle, with pieces that just do not fit together. This further made Brealey, Myers & Marcus (2008) list dividend policy issue as one of the ten unresolved issues in finance. Since dividend decision has to do with the amount and timing of any cash payment made to the firm's shareholders, the decision is very crucial to the organization as it is capable of influencing its overall value, capital structure, stock price as well as determining the amount of taxes to be paid by the shareholders, plus the fact that dividend is paid after tax.

The focus of this study is specifically on corporate taxes and agency costs implication on dividend policy of non-financial companies in Nigeria. Allen, et al. (2000) argue that corporate investors like to invest in dividend paying firms due to the tax benefit over individual investors, and dividends payments by nature increase the overall firm's performance by minimizing asymmetric information. Several recent studies like Nicol (1991), Callen, Morling and Pleban (1992), Morgan and Thomas (1998), McGrattan and Prescott (2005), Naceur, Goaid and Belanes (2006), Berzins et al. (2013), Maladjian and El Khoury (2014) have examined the impact of tax changes and agency costs on dividend payout ratio. They concluded that cash flow and tax considerations are significant determinants of firm's dividend policy decision. On the other hand, the studies of Gul, Khan, Ahmad, Rehman and Shah (2012), Odia and Ogiedu (2013), Toby (2014), Osegbue, Ifurueze and Ifurueze (2014), Hassan, Tanveer, Siddique and Mudasar (2013), Nwidobie (2013) Maladjian and El Khoury (2014) all concluded otherwise: that there is no significant relationship between corporate taxes, agency costs and dividend policy of firms.

With respect to different companies' objectives and circumstances, it is possible to have different dividend payouts that agree with firms, industries, markets or regions. Previous empirical studies like the ones examined above have focused more on dividend payment patterns of developed markets, which may not be the same for emerging markets like Nigeria and Sub-Saharan Africa. In Nigeria, and to the best of our knowledge, few studies have examined the dividend pattern of corporate firms and focused on non-financial sector of the economy. However, it is still not clear what the dividend payment pattern of companies in Nigeria is. Very few studies have again specifically paid attention on the analysis and effect of cash flows (agency costs) and corporate taxes on the dividend behaviour of firms in the Nigerian context.

In view of the foregoing, coupled with the conflicting findings, there is no consensus about what factors affect corporate dividend policy across time, markets, countries and firms. The issue becomes even more difficult with respect to emerging markets. Hence, it is deemed necessary to empirically investigate the effect of corporate taxes and agency costs on dividend policy decisions of non-financial firms in Nigeria. It is argued that taxes payable on the profits of any company at a rate of 30%, coupled with the recent changes to the company's tax system in Nigeria and the associated agency costs are likely to influence companies' dividend policy decisions (Nigeria Fiscal Guide, 2013 & 2014). Also, in Nigeria and to the best of our knowledge, much work in the area of corporate taxes, agency costs and dividend policy of non-financial firms have not been extensively investigated. Hence, a model is developed that accounts for the effect of taxes and agency costs on dividend payout ratio in the Nigerian context.

## Literature Review

### Conceptual Review

#### (a) Concept of dividend and Agency Costs

Dividends are cash payments distributed to shareholders out of the earnings of the firm, and the percentage of the earnings paid is the payout ratio. On the other hand, yield in dividend is determined by dividing dividend per share by the share price. The usual practice is to pay dividend by cash, but other forms of dividend payments exist. These include cash dividend, stock dividend/bonus shares and stock split (Pandey, 2010).

On the other hand, dividend policy of firms deal with the various managerial decisions with respect to the amount, ratio and pattern of distribution/payment of dividends to the respective shareholders of the firm. It has been argued in the extant literature that most shareholders prefer cash dividend to either script issues or capital gains but the theoretical literature as it relates to taxes suggests that investors do not want cash dividends in view of the tax disadvantages associated with them.

#### (b) Corporate Taxes and Dividend Policy

One of the major assumptions of Miller and Modigliani (1961) irrelevancy theory of dividend policy is that, in a world without taxes and even transaction costs, dividend policy does not matter. But they failed to realize that there can never be a world without taxes, because taxes by their nature form the bed-rock for modern government's source of revenue. Hence, their assumption was far from reality. Their position was strongly supported by Black and Scholes (1974), Miller and Scholes (1982) and Conroy et al. (2000): but the studies of Baker and Farrelly (1988) and Baker et al. (2005) find contrary evidence. In real terms, investors actually pay taxes on both dividend and capital gains at different applicable rates. This was why Brennan (1970) and Al-Malkawi (2007) argue that since dividend payment is disadvantageous due to taxes when compared to capital gains, shareholders will thus need an adjusted higher rate of return on stock to compensate for the tax effect.

The favourable tax differences with respect to capital gains are in the tax savings. Hence, capital gains tax has advantage over cash dividend but only favours low dividend payout policy such that investors will pay more for low dividend yield shares. In this case, the tax differential will now attract tax-clienteles, a situation where shareholders in high-tax brackets will own low-payout shares, while others in low-tax bracket will own high-payout shares. Berman (1977) was the first to argue along this line that higher pretax returns are the compensation for the investors for facing tax disadvantage. Thus, several shareholders prefer capital gains. In real life situation, many investors usually earn extra income tax rate that is more than the capital gains tax rate. For this reason, payment of dividend is sometimes regarded as bad omen as it result in higher taxes and reduces the overall wealth of the shareholders. In general, tax differential favours low-payout clientele or investors (Pandey, 2010).

#### (c) Agency Costs and Dividend Policy

Agency costs emanate from the conflict of interests between firm's managers and shareholders (owners of the company), and take the form of preference for on-the-job perk, shirking and self-interest and entrenched decisions that reduce shareholders wealth. The magnitude of these costs is limited by how well the shareholders monitor the actions or activities of the managers. The agency

cost theory of dividend policy asserts that dividends are usually employed as a means of reducing agency conflicts between shareholders and managers (Rozeff, 1982; Easterbrook, 1984; Jensen, et al., 1992). When cash is paid as dividend, it reduces the total amount of cash at the disposal of managers and as such, managers have no other choice than to look to the direction of the stock markets to raise funds in form of external financing. In order to access this fund, managers have no other choice but to disclose information and reduce agency costs. By doing so, dividend payments benefit shareholders by minimizing the agency costs associated with monitoring managers in expanding their role in the capital market in sourcing for funds. This position was strongly supported by Jensen and Meckling (1976), Jensen (1986) and Al-Malkawi (2008).

In line with the foregoing, modern theory of agency costs argues that agency costs or conflicts of interest between corporate owners and managers are minimal in a situation where corporate ownership is separated from control. Where managers own substantial stakes in the ownership of the firm, their interests and goals are better aligned with those of the shareholders (Jensen & Meckling, 1976), and also in firms where a good number of shareholders are well able to monitor the activities of managers (Shleifer & Vishney, 1986).

#### **(d) Companies Income Tax in Nigeria**

Nigeria company income tax was first introduced in 1961. The initial act of parliament establishing it has undergone series of amendments till date. It is currently coded in the Companies Income Tax of 2004 (CITA CAP C21 2004 LFN) as amended in 2007. Before 1996, the rate of income tax was 35% which is also applicable to company's profits. The percentage rate of company income tax was amended from 35% to 30% on January 1 1996 (Ehigiamusoe, 2013). Currently, the country Tax System is still undergoing significant changes with the obsolete ones being replaced and simplified with new ones.

Taxes are levied on the income of companies on yearly basis at a rate of 30%. Some of the taxable incomes are profits accruing in or derived from brought into or received from a trade, business or investment. Companies are required by law to first pay taxes on their yearly profit before declaring dividend to shareholders. In fact, other forms of company's distributions and capital gain tax are subject to 10% rate at source. But bonus shares or script issues are not taxable in Nigeria. Even where a company owns a share in another firm and received dividends, such dividend profits are not included in the final computation of company's income tax.

### **Empirical Literature**

#### **(a) Evidences from other Parts of the World**

The empirical analysis of one of the foremost advocates of dividend policy of firms, Lintner (1956), submits that companies steadily change dividend payments in response to fluctuations in earnings, has got the status of a stylized fact on company dividend policy. The empirical findings from US listed firms reveal that managers vary dividends in order to react to unanticipated and non-transitory variability in the income of firm, and with well-defined policies in terms of the speed with which they adjust dividends towards a long run target payout ratio (Sheikh, 2012).

DeAngelo & DeAngelo (1990) empirically examined dividend policy behaviour of 80 listed firms in the New York Exchange due to a protracted financial crisis for a period of 6 years (1980 to 1985). It was found that most of the firms in the analysis reduced dividends, and more than half were facing binding debt covenants in years they did not reduce dividend payments. Jensen, Solberg and Zorn (1992) examine dividends policy in relation to insider ownership of stock and

leverage. Their analysis indicate that dividends can be used to minimize the conflict of interest between managers and shareholders. Taking into consideration the differences in profitability, growth prospects and investment opportunities, they find that dividends have negative relationship with leverage and insider holdings. These results are consistent with Jensen's (1956) free cash flow findings of dividend policy.

Baker and Powell (2000) study on the U.S stock exchange concluded that dividend determinants are industry specific and anticipated level of future earnings. Lambert, Lanen and Larcker (1989) examined differences in the dividend policies of companies that used executive stock option plans. They observed that dividends are lower in relation to the levels of dividend in some selected firms that did not use such plans. Their findings also revealed that dividend policies are partially set based on management interests rather than purely maximizing the wealth of shareholders. The implication of these results is that management may have other selfish interests when their actions are difficult to monitor (Sheikh, 2012).

Moscu (2012) examined dividend policy decisions of 209 companies quoted on London and Paris Stock Exchanges in 2010. The results from the empirical analysis revealed that firms pay high dividends in the UK where ownership is more dispersed and free cash flow is enough to pay shareholders. In the case of France, leverage, the previous year dividend and earnings per share significantly influence corporate dividend policy. Thus, in these two countries, dividend policies are best explained by either cost of transactions, rate of development or institutional factors.

Andres, Betzer and Goergen (2012) examined the relationship between concentration of control, controlling shareholder and tax preference of earnings distribution on dividend policy of 220 firms in Germany for a period of twenty two years (1984 to 2005). The empirical results show that concentration of control does not affect dividend payments, but the nature of family controlled firms significantly influences payment of dividends. Also, firms controlled by banks have low dividend payouts while taxes do not affect dividend policy decisions.

In Vietnam emerging market, Nguyen (2012) examined the impact of company's characteristics and corporate governance on dividend policy. He used a panel data analysis on one hundred and sixteen listed companies on Hochiminh and Hanoi Stock Exchanges in the year 2009. He found a strong positive relationship between profitability and dividend payouts, and a negative relationship between business risk and dividend distributions. Furthermore, quality of audit and nature of industry also influenced dividend payments. He concluded that firm's profitability is one of the most relevant factors affecting the dividend policy in Vietnam. Hence, he recommended among others that external investors should rely on the future expectations about the profitability of a firm while considering whether to buy, hold or sell their shares.

In a related study in Casablanca stock exchange, Aguenau, Farooq and Di (2013) investigated the relationship between ownership structure and firm's dividend policy. Using a panel data analysis on two main areas of ownership structure (the ownership concentration and the identity of the largest shareholders) for a period of seven years from 2004 to 2010. The results from the empirical analysis revealed that ownership concentration and identity of the largest shareholders have a negative effect on dividend policy of firms listed on the Casablanca stock exchange.

Waswa (2013) examined the main factors affecting dividend payouts of firms in the agricultural industry of Kenya listed on the floor of the Nairobi stock market for a period of six years (2005 to 2010). Using descriptive statistics and a panel data analysis the empirical results reveal a positive relationship between profitability, liquidity and firm's dividend payments. The results also reveal an inverse relationship between debt, firm's size, firm's growth and dividend payouts.

Maladjian and El Khoury (2014) investigate the effects of size, lag dividend payments, debt, profitability, liquidity, growth and firm's risk on dividend payout ratios of banks listed on Beirut Stock market in Lebanese for a period of 7 years from 2005 to 2011. Employing the dynamic panel regressions analysis, the results indicate a significant positive relationship between size, risk and lag dividends, profitability and opportunity growth were negatively related with dividend payout policy of firms. The results further suggest that dividends are paid by companies in order to minimize agency problems having taken into consideration the importance of dividends stability. Thus, in the Lebanese context, companies would rather reinvest their earnings for profitable investments opportunities instead of paying dividend to shareholders.

Mbuvi (2015) empirically investigated the effect of dividend announcement, dividend payout, tax incentives and excess cash flows on shareholders wealth in Nairobi Securities Market. Using descriptive statistics and econometric technique of ordinary least squared (OLS) on primary data collected through questionnaires, the results from the analysis revealed that dividend announcement, dividend payouts, tax incentives and free cash flows positively influence the wealth of shareholders in the Nairobi Securities Market.

Other similar studies in this regard include Chawla and Chadha (2014), Callen, Morling and Pleban (1992), Barabás and Fazakas (2010), Amitabh and Charu (2010), Gul, Khan, Ahmad, Rehman and Shah (2012) and Zameer, Rasool, Iqbal and Arshad (2013).

## **(b) Empirical Evidences from Nigeria**

The study of Odia and Ogiedu (2013) empirically examined the effect of profitability and taxes on dividend payouts of 19 listed banks on the floor of the Nigerian Stock Market for a period of nine years (2000 to 2008). Employing the ordinary least squared regression (OLS), the results from the empirical analysis indicate that bank's profitability has a strong positive impact on dividend payments; taxes have an inverse relationship with bank's dividend policy. The study of Oyinlola and Ajeigbe (2013) empirically investigated the relationship between stock prices and dividend payouts of twenty two listed companies in Nigeria for a period of five years from 2009 to 2013. Using the ordinary least squared econometric technique (OLS), correlation analysis and the Granger Causality Test, the results from the analysis indicate a strong positive relationship between dividend payments, retained earnings and share price.

Chichi and Ezeji (2013) in an empirical manner examined the relationship between corporate taxes, cumulative total earning per share, cumulative total retained earnings per share and dividend policies of 35 companies from seven different sectors of the Nigerian economy for a period of 12 years (2000 to 2011). Using the ordinary least squared (OLS) and Granger Causality Test, the OLS results revealed different levels of directional relationship among the hypothesized variables. With respect to sectorial ranking, the banking industry had the highest performance in terms of corporate taxes and dividend payouts within the last ten years. This performance ranking was followed by breweries, petroleum and marketing, conglomerates, insurance, construction and allied, food and beverages. From the Granger Causality results, corporate taxes do not Granger Cause dividend policy payments in Nigeria.

Uwuigbe (2013) investigated the main factors affecting dividend payments of fifty listed firm on the Nigerian Stock Market for a period of 6 years (2006 to 2011). Using the ordinary least squared (OLS) econometric technique on firm's performance, size, debt, board independence the empirical analysis revealed a significant positive relationship between firms' financial performance, size, board independence and dividend policy of firms in Nigeria.

Adediran and Alade (2013) empirically examined the impact of dividend policy on twenty five listed companies' profitability, earning per share and investment opportunities in Nigeria. Using the ordinary least square (OLS) econometric technique, the results reveal a significant positive relationship between profitability, earning per share, investment opportunities and firm's dividend policy. Osegbue, Ifurueze and Ifurueze (2014) empirically analyzed the effect of dividend payouts on bank's performance in Nigeria for a period of 21 years (1990 to 2010). Using a panel data analysis on variables such as debt, excess cash flows, current profitability, risk and taxes, the results from the analysis reveal that banks' dividend payments do not affect the hypothesized independent variables. The overall implication of these results is that dividends are paid by banks in Nigeria with the aim of minimizing agency conflicts and firm's reputation.

Toby (2014) carried out a study on the importance of firm's dividend policy on 20 highly capitalized companies share prices in Nigeria for a period of 8 years (2005 to 2012). Using the panel data analysis, the results show that while retained earnings have a strong positive impact on dividend policy, market price does not have any significant impact. The study of Duke, Ikenna and Nkamare (2015) investigated the relationship between valuation of share prices and two major banks' (GTBank and United Bank for Africa) dividend policies in Nigeria. The results from the analysis revealed that while dividend yield has a significant positive effect on share price, retention ratio has a negative impact on dividend yield.

Kajola, Adewumi and Oworu (2015) examined the effects of dividend payouts on the financial performance of 25 non-financial companies in Nigeria over a period of ten years (2004 to 2013). Using the panel data analysis and a pooled Ordinary Least Squares (OLS), the results from the empirical analysis revealed a significant positive relationship between dividend policy and firm's financial performance in the country. In another related study, Ehikioya (2015) empirically examined the relationship between firm's performance and dividend policy of firms in emerging economies. He employed a panel data analysis on 81 active companies quoted on the floor of the Nigerian Stock Market for a period of 10 years (2001 to 2010). The result from the analysis indicate that dividend policy strongly affects firms' performance in Nigeria and developing countries' stock markets.

Other related studies in Nigeria include Fodio (2009), Uwuigbe, Jafaru and Ajayi (2012), Adeyemi and Adewale (2013), Nyor and Adejuwon (2013), Oyinlola, Oyinlola and Adeniran (2014)

### **(c) Gap in the Empirical Literature**

Having carried out a detailed review of the relevant empirical literature on corporate taxes, agency costs and dividend policy decisions of firms in Nigeria, the following gap in knowledge become glaring. For instance, Uwuigbe, Jafaru and Ajayi (2012) employed ownership structure and firm size; Adeyemi and Adewale (2013) used share prices and investors attitude; Odia and Ogiedu (2013) and Ehikioya (2015) used profitability and taxes; Oyinlola and Ajeigbe (2013), Toby (2014) employed retained earnings and prices; Uwuigbe (2013) used performance, firm size, leverage, board independence; Nwidobie (2013) employed agency costs and shareholders' needs; Osegbue, Ifurueze and Ifurueze (2014) used excess cash flows, profitability, debt, taxes and risk; Duke, Ikenna and Nkamare (2015) employed dividend yield, share prices and retention ratio, Kajola, Adewumi and Oworu (2015) used firm performance, size, assets tangibility and leverage in their analyses of the effect of dividend policy decisions on Nigerian firms. Unfortunately, none of these studies apart from that of Osegbue, Ifurueze and Ifurueze (2014) jointly used corporate taxes and agency costs in analyzing the impact of dividend payout decisions of firms in Nigeria. The other studies either used profitability, leverage, firm size, shareholder's needs, retained earnings,

investor's attitudes and board independence in their analyses of dividend policy decisions. Again, to the best of our knowledge, only Kajola, Adewumi and Oworu (2015) focused on non-financial firms, while others either focused on banking industry alone or a combination of both banking industry and non-financial industry in Nigeria.

Also, in terms of the method of data analysis, only Ehikioya (2015) and Kajola, Adewumi and Oworu (2015) used the panel data analysis, while others studies like Oyinola and Ajeigbe (2013), Adediran and Alade (2013) among others used the multiple regression technique and the Granger Causality Test. Finally, with respect to the time frame, most of these studies were conducted 5 to 10 years back. The most recent one was conducted in 2013. Therefore, the current study is making use of both statistical and econometric tool of panel data method of data analysis which is known to be more appropriate when dealing with cross sectional time series data, and it is expected to cover a wider range of about 8 years (2008 to 2015), to bring the study up-to-date. This is what necessitated this current study. Hence, the current study focuses purely on the effect of corporate taxes, agency costs on dividend payments of non-financial companies in Nigeria. Other relevant control variables such as firm size, firm age, growth opportunities and business risks were also analyzed in the study.

**Table 2.1: A Summarized Table of Some of the Empirical Literature Discussed**

S/N	Author/Year	Country	Methodology	Period of Study	Findings
1	Lintner (1956)	US	Regression Analysis	1947 to 1953	Free cash flow, earnings stability and the last period's dividend payout affect dividend policy
2	DeAngelo and DeAngelo (1990)	NYSE	Regression Analysis	1980 to 1985	Leverage and agency costs positively affect dividend policy
3	Jensen, Solberg and Zorn (1992)	NYSE	Panel Data	1966 to 2010	Agency costs, growth prospects and investment opportunities positive impact, while leverage and insider holdings have negative impact.
4	Callen, Morling and Pleban (1992)	U.S	Panel Data Models and Generalized Least Squares	1985/86 and 1990/91	Cash flow and taxes have positive impact on dividend policy.
5	Al-Malkawi (2008)	Jordan	Unbalanced panel Data	1989 to 2003	Size, profitability and age have strong impact, while leverage does not
6	Hyunjoon and Zheng (2009)	U.S	Logistic Regression Model		Profitability and fewer investment opportunities positive.
7	Moscu (2012)	London and Paris Stock Exchanges	Panel data Analysis	2010	Ownership and cash flows affect dividend policy in London, earnings per share, lag dividend and leverage affect dividend policy in France
8	Munyua (2012)	NSE	Regression Model	2004 to 2013	Dividend per share and the share prices have strong positive relationship.
9	Zameer, Rasool, Iqbal and Arshad (2013)	Pakistani banking sector	Stepwise Regression Analysis		Profitability, lag dividend and ownership pattern are positive, liquidity is negative, Size, debt, agency costs, firm's growth and risk were not significant.

10	Maladjian and El Khoury (2014)	Beirut Stock Exchange	OLS and the dynamic panel data analysis	2005 to 2011	Size, risk and lag dividends positive, but growth and profitability negative.
11	Mbuvi (2015)	Nairobi Securities Exchange	Regression Analysis, and descriptive statistics		Taxes and free cash flows positive
12	Uwuigbe, Jafaru and Ajayi (2012)	Nigeria	Panel data	2006 to 2010	Performance, ownership structure and firm's size
13	Odia and Ogiedu (2013)	Nigeria	OLS	2000 to 2008	Bank profitability positive, taxes negative
14	Oyinlola and Ajeigbe (2013)	Nigeria	OLS, Coefficient of Variability, Granger Causality	2000 to 2011	Taxes negative,
15	Uwuigbe (2013)	Nigeria	OLS	2006 to 2011	Performance, size of firms and board independence positive
16	Nyor and Adejuwon (2013)	Nigerian Banking industry	Multiple Regressions Analysis	2001 to 2010	Profit after tax, shareholder funds and Liquidity affect dividend payout
17	Oyinlola, Oyinlola and Adeniran (2014)	Nigerian brewery companies	Multiple Regression	2002 to 2010	Firm's performance positive
18	Nwidobie (2013)	Nigeria	Multiple Regression	2003 to 2010	Agency problem highly significant
19	Adediran and Alade (2013)	Nigeria	OLS		Profitability, investment, earnings per share positive.
20	Osegbue, Ifurueze and Ifurueze (2014)	Nigeria	Panel Data	1990 to 2010	Free cash flows, current profitability, financial debt, risk and taxes not significant.
21	Toby (2014)	Nigeria	OLS	2005 to 2012	Retained earnings, capital appreciation, reinvestment level highly significant,
22	Kajola, Adewumi and Oworu (2015)	Nigeria	OLS and Panel data	2004 to 2013	Firm performance (ROA) positive; firm size, asset tangibility and leverage no impact.
23	Ehikioya (2015)	Nigeria	Panel Data Regression	2001 to 2010	Performance, profitability very significant.

Source: Author's computation, 2017

## Methodology

### Research Design

The basic research design adopted in this study is an empirical approach which involves investigating phenomena in terms of relationships using real world data or information. In particular, the study uses the longitudinal survey (ex-post facto) research design. This method entails the use of historical data to gain knowledge about some phenomenon over a period of time, as well as quantitative, statistical or regression techniques in evaluating the research issues or problems.

## Population and Sample Size

The population consists of all firms listed on the Nigerian Stock Market as at December 31, 2015. There are 198 quoted active companies (NSE, Fact book 2016). From this population, randomly 75 non-financial firms are selected that must have fulfilled the obligation of publishing annual reports for the year ended 2008 to 2015. The final sample size is based on Yamane's formula (1967) in Guilford and Fruchter (1973) coupled with a random sampling approach. The statistical formula is stated, thus:

$$n = \frac{N}{1 + N(e^2)} \dots\dots\dots (1)$$

Where: n = sample size, N = size of the Population, e = desired Level of significance

Consequent on the above formula, the minimum sample size is 63 listed non-financial firms at 5% level. However, this study limits itself to only forty-eight (48) non-financial companies among the 63 that have audited annual financial reports for the period under study.

## Data Source

Companies' annual reports document for the period 2008 to 2015 serve as the research instrument for this study. The nature of this study necessitated the use of secondary data. The raw data for ownership concentration and control variables were sourced from companies audited annual reports and Nigerian Stock Exchange fact books. The stock price data for computing annual stock returns for the companies used in this study was sourced from the Nigerian Stock Exchange official daily price list.

## Theoretical Foundations and Model Specification

In this section, the empirical models for the study are developed. The pattern of the modeling involves directly deriving the econometric models from theoretical foundations. In this direction and given the goal of the study, two regression models are employed for the study. The tax hypothesis advocates that company tax on distributions and taxes on dividends in the hand of shareholders are relevant costs in the determination of dividend policy. More specifically, dividend taxes and capital gains differentials coupled with the differences between corporate taxes on distributed and on retained earnings are also included. For instance, where company taxes on distributions is greater than that on retained earnings, it may lower expected incomes of a firm that pays dividends relative to the one that does not (Jagannathan, Stephens & Weisbach, 2000). Similarly, if shareholders dividends are taxed more than capital gains, returns on investment would be estimated by investors on the basis of after tax and stock prices will negatively vary with the company's rate of dividend payout. Indeed, the main tax hypothesis suggests that a marginal tax on dividends make capital gains a better and a cheaper way of returning wealth to shareholders. This hypothesis is in agreement with the conservative dividend policy theory, by advocating that share repurchases should be adopted by firms as a way of returning cash to shareholders (Allen & Michaely, 1995; Fama & French, 2001).

Following the tax hypothesis of the dividend policy presented above, the tax-dividend relationship is specified below. The model follows a recursive format by employing the Lintner partial adjustment model with modifications that allow for use of tax hypothesis variables as well as developing country context. The use of a partial adjustment format helps to provide adaptation for the dynamic behaviour of dividend policy within companies (see Allen & Michaely, 1995;

Fama & French, 2001). The model therefore modifies that of Mookerjee (1992) and is presented in its basic form as:

$$dividend_i = \alpha_0 + \alpha_1 Profit\ after\ tax_i + \alpha_2 Lagged\ dividend_i + \alpha_4 EPS_i + u_1 \dots \dots \dots (3.1)$$

The model adapts Lintner’s partial adjustment structures by including EPS (earnings per share which is an essential factor in dividend determination. Thus, equation (3.1) is the foundational model of the structural or behavioural determination of dividend policy. Given the theoretical framework presented above, retained earnings are included in the model in equation (3.1) to recursively obtain an expanded form of the modified Lintner model as:

$$dividend_i = \alpha_0 + \alpha_1 Profit\ after\ tax_i + \alpha_2 Lagged\ dividend_i + \alpha_3 retained\ earnings_i + \alpha_4 EPS_i + u_2 \dots \dots \dots (3.2)$$

In equation (3.2), retained earnings (which the tax hypothesis argues to be a potent alternative to dividend distribution given high taxation) is expected to be negatively related with dividend payout for the respective firms. Apparently, retained earnings are also expected to exert a distributed lag effect on dividend since past retained earnings reflects the company’s intention for current period dividend payout. Thus, equation (3.3) is specified recursively (from) equation (3.2) to include the lag of retained earnings in the dividend function as:

$$dividend_i = \alpha_0 + \alpha_1 profit\ after\ tax_i + \alpha_2 lagged\ dividend_i + \alpha_3 retained\ earnings_i + \alpha_4 lagged\ retained\ earnings_i + \alpha_5 EPS_i + u_3 \dots \dots \dots (3.3)$$

Moreover, following DeAngelo, DeAngelo and Skinner (2009), the company income tax (CIT) can be explicitly introduced into the dividend function in order to observe the particular effect of changes in tax liabilities by the companies on dividend payout. The reformulated model is specified as:

$$dividendi = \alpha_0 + \alpha_1 profit\ after\ tax_i + \alpha_2 lagged\ profit\ after\ tax_i + \alpha_3 lagged\ dividendi + \alpha_4 CIT\ liability_i + \alpha_5 EPS_i + u_4 \dots \dots \dots (3.4)$$

In relating dividend with agency costs, the theoretical foundations provided in the agency theory of dividend policy are adopted. The underlying assumption in the model of Jensen and Meckling (1976) is that, managers do not always act in the interest of the shareholders. The challenge of ownership separation from control often leads to conflict of interests. Ideally, with increase in retained earnings, corporate managers may likely commit cash into projects with negative NPV to satisfy their selfish interest as a result of incompetency. But with a stable dividend policy the value of the firm is enhanced as it indirectly reduces the amount of excess cash flows available to management and hence, checkmate their over investment problem (Jensen, 1986).

Another agency theory-based explanation of how dividends increase value is illustrated in Easterbrook (1984). While the theory of transaction cost advocates that dividend payments minimize values as they cost external financing, Easterbrook (1984) suggests otherwise that the process helps to reduce agency conflicts. The idea is that dividend payouts is one of the ways to resolve the problem of collective action that causes under-monitoring of firm’s management activities.

Thus, dividend payments and the subsequent increase of external finances causes financial intermediaries like those of investment banks, regulators of the securities exchange where the

firm’s stock is traded, and potential investors to closely monitor the activities of firm’s managers. This type of monitoring minimizes agency costs and appreciation of the company’s market value.

Therefore, this study uses a variant of the cost minimization model (which springs from the agency costs theory) where an attempt is made to capture the variables that are likely to be relevant in the determination of dividend policy of firms in the Nigerian context. The general model however offers a template for including agency costs factors as they interact with other factors and generate changes in dividend policy among the selected firms. The general model is therefore specified as:

$$divpay_i = \delta_0 + \delta_1 acosts_i + \delta_2 tcosts_i + \delta_3 fsize + \delta_4 fage + \delta_5 subummy + \epsilon \dots \dots \dots (3.5)$$

Where the subscript, *i*, denotes the sample observation, *i* = 1,2,...n; *divpay* is a proxy for the firm’s target payout ratio; *acosts* represents agency costs; *tcosts* captures transaction costs; *fsize* measures firm size; *fage* represents *firm age*; *subdummy* captures the effect of the sub-industry type on the intercept, and  $\epsilon$  is the disturbance.

The model in Equation (3.5) can be expanded by exploring the relevant factors that represent agency and transaction costs. Here, Schooley and Barney (1994); Moh’d, Perry and Rimbey (1995), and Manos (2002) is followed in the expansion. To determine agency costs, the *acosts* variable in Equation (3.5) is broken down into four variables. These include: *inst*, measuring institutional ownership; *dirs*, measuring insider ownership; *foreign*, measuring foreign ownership; and *smval*, measuring stock market value. The *tcosts* variable is broken down into two, risk variables and a growth variable. The two risk variables include risk (standard deviation of stock prices at year end over the sample period), measuring business risk, and *debt*, which is a measure of financial risk. The growth variable, *growth*, represents growth opportunities. Equation (3.5) can thus be more specifically expressed in the form:

$$divpay_i = \delta_0 + \delta_1 gov_i + \delta_2 inst_i + \delta_3 dirs_i + \delta_4 foreign_i + \delta_5 smval_i + \delta_6 risk_i + \delta_7 debt_i + \delta_8 growth_i + \lambda subdummy_i + \epsilon \dots \dots \dots (3.6)$$

**Summary of the A- Priori Expectations**

The *a-priori expectations* for Tax-Dividend Policy relationship;  $\alpha_1, \alpha_2, \alpha_3, \alpha_4, \alpha_8, \alpha_7 > 0$  ;  $\alpha_5, \alpha_6 < 0$ .

The *a-priori expectations* for Agency Costs-Dividend Policy relationship;  $\delta_5 > 0$  ;  $\delta_1, \delta_2, \delta_3, \delta_4, \delta_6, \delta_7, \delta_8 < 0$ .

**Method of Data Analysis**

The statistical tools (descriptive statistics and correlation analysis) and the panel data analysis econometric techniques were employed in the analysis of the data. While the descriptive statistics and correlation analysis were used to provide the initial characterization and to properly describe the nature of the data, the panel data analysis was specifically used for the main analysis.

The panel data analysis is preferred in this study as it considers the cross-sectional and time-series attributes of the sampled data. In essence, the panel data analysis accommodates ‘time as well as the heterogeneity’ effects of the quoted companies. In all, the panel data analysis captures the characteristics by including the quoted company’s specific effects which may be random or fixed. Moreover, the fixed effects model could be costly in degrees of freedom because it is

equivalent to the use of a dummy variable for every quoted companies. The random effects model, on the other hand, assumes the independence between the error term and the independent variables. In any case, Hausman test is used to select between fixed and random panel estimation techniques. However, for ease of comparison, the simple pooled ordinary least square (OLS) as well as the fixed and random effects regression models were adopted in this study. In conducting all data analysis, both Microsoft Excel and Eviews 8.0 econometric software packages are used.

## Operational Measurement of Variables

**Dividend payout (divpay):** This is taken in two variations. In levels, the variable is the amount of dividend payout; while in ratio, it is taken as the ratio of total dividend paid to total profit after tax for the firms.

**Profit after Tax:** This is the profit after taxation as announced in the records of the companies in the sample. It is expected to have a positive relationship with dividend since higher profits should lead to higher willingness to pay dividends.

**Lagged dividend payout:** This is the immediate past period dividend payout value. High past dividends in past period usually stimulates higher expectation about dividends by shareholders in current period. It is also expected to have positive relationship with dividend payout.

**Retained earnings:** This is the value of retained earnings by the company in the records. It is expected to represent shareholder wealth buy-back by management in order to boost the value of the shares, instead of paying it as dividend. It is expected to have a negative relationship with dividend payout ratio.

**CIT liabilities:** It is company income tax payable by the companies at every financial year end as specified in the yearly annual report. Thus, a positive relationship is expected.

**Earnings per share (EPS):** Earnings per share reflects that value or worth of shares held by the shareholders. Higher EPS indicates higher returns on shares held. It is expected to be positively related to dividend payout.

**Value dummy (valdum):** This represents a change in market value of the company over the year. It takes the value of 1 if the market value (share price of a company) increased from previous year and 0 if the price did not increase (or actually decreased).

**Institutional ownership (inst):** It is the amount of shares held by mutual funds, commercial banks, financial institutions and insurance companies as a fraction of total shares. The fractions of corporate ownership relative to other investors have more capacity to monitor the activities of firm's managers as they possess the requisite expertise to do at a lower cost. This again suggests a negative relationship between institutional ownership and the dependent variable.

**Director ownership (DIRS):** This represents the total amount of shares held by the firm's directors and their relatives as a ratio of total equity shares. The higher the percentage held by directors and their families, the more their interests conform to those of outside shareholders. Thus, director ownership in this context is expected to have a negative relationship with the dependent variable.

**Foreign ownership (Foreign):** This represents the percentage of equity ownership by foreign entities as a ratio of total equity shares (Glen, Karmokolias, Miller & Shah (1995)). This of course indicates a negative relationship between the percentage of foreign ownership and the dividend payout ratio.

**The Three Transaction Costs Variables:** They are growth, risk and debt. Growth is the annual growth rate of total assets of the company, risk is the standard deviation of annual share prices of the company. When it is expected of the company to regularly increase external funding, its costs of transaction will equally increase. Depending mainly on external funding will increase growth opportunities and earnings variability. Hence both growth and risk are expected to have negative marginal effects on the dividend policy of firms.

**Debt (debt):** This measures the level of company's exposure to financial risk. It is an increase in the reliance on external funding which increases the total risk of the stock. Therefore, debt, compared to the other risk factor is also expected to be negatively related to the payout ratio (Agrawal & Jayaraman, 1994).

**Firm Size (FSIZE):** On the one hand big firms are well able to raise external financing at a lower cost and have more different ownership structure. Thus, face higher degree of agency problems. The lower transaction costs and the increased ability for agency problems, indicates a positive relationship between firm's size and dividend policy mechanism.

**Firm Age (FAGE):** It is measured by the log of the number of years since the establishment of the company. Thus, a growing firm is expected to be negatively related with dividend policy, while a matured firm will be positively related with its dividend policy.

## Empirical Analysis and Presentation of Results

As explained in the preceding section, the panel data analysis method is employed in the econometric analysis. The discussions of findings follow each of the various analyses as follows:

### Descriptive Statistics

Descriptive statistics show the summary of data and other basic characteristics within the series. The annualized summary statistics for the main variables in the study are presented for the sampled firms in Table 4.1.

**Table 4.1: Descriptive Statistics**

	Mean	Max.	Min.	Std. Dev.	Skew.	Kurt.	J-B	Prob
DIVIDEND	164415	2161924.9	0	1441229	13.10	184.4	397597.6	0
CIT	691335	2518743.4	648904	7417844	-4.46	35.3	13275.7	0
EPS	2.16	26.67	-9.86	4.0	2.49	11.8	1200.1	0
AGE	25.02	49	1	12.6	-0.55	2.1	24.6	0
PAT	5215723	2.01E+08	1.26E+08	2267242	4.881	45.59	22587.9	0
SP	35.81	700	0.5	73.4	4.61	32.0	10949.5	0
FOREIGN	0.27	0.88	0	0.3	0.47	1.59	34.2	0
INSTITUTION	0.16	0.78	0	0.2	1.44	3.80	105.7	0
DIRSH	2.86	31.12	0	6.1	2.92	11.9	1342.0	0
RISK	5.77	121.19	0	14.0	4.71	28.5	8758.5	0
DEBT	23472532	3.21E+08	0	47269725	3.27	15.4	2314.0	0
GROWTH	0.76	28.37	-7.66	2.5	5.55	60.9	41160.3	0
VALDUMMY	0.538732	3	0	0.520172	0.222	2.65	3.7957	0.15

Source: Author's computation (2016)

The mean dividend value is N164415 million Naira for the entire sample with maximum value reaching over N2161924.9 million Naira. Some companies did not pay dividend for certain time, that is why the minimum dividend value is zero. There appeared to be quite a lot of variations in the dividend payouts of the firms, the standard deviation is very large compared to the mean value, suggesting a high level of variability of the pattern of dividend payouts either across the firms or overtime within firms. The summary statistics for dividend payouts also indicates that the distribution of the variable (dividend payout) among the firms is not symmetric; the skewness value of 13.10 shows that more companies pay less dividends than the reported mean value which also suggests that some firms paid very large dividend values (as the maximum value also indicates). The Jaque-Bera (J-B) statistic for the dividend payout variable is significant at the 1 percent level and implies that the probability distribution of the sample for the variable is not normally distributed. This invariably suggests that the dividend series across the firms is heterogeneous and exhibit firm-specific characteristic. This is one justification for the application of the panel data estimation technique in this study.

The descriptive statistics for the other variables in the study also present interesting outcomes. For the corporate taxes of the firms (CIT), the mean and maximum values clearly show that on average, tax liabilities are higher than dividend payout for Nigerian firms. The degree of variability is also very high among the firms, although the skewness value is negative (-4.46), indicating that more firms paid higher taxes than the reported mean value for the period of the sample. The J-B statistic also indicates non-normal distribution and indication of heterogeneity in the pattern of CIT liability by the firms. Indeed, all the variables in the study had highly significant J-B values, clearly showing that individual firm characteristics are quite important in the measurement of the variables. Average EPS for the sampled period is 2.16 with a high maximum value. The standard deviation also shows that there is a large spread in the EPS among the firms. Average age of the non-financial firms in the sample is 25 years which is a fairly long period, although there were also quite young firms in the sample. The share price also has a mean of N35.81 with very high standard deviation. Indeed, there were firms with share price as high as N700 for the period in the analysis.

The investor pattern for the firms shows that foreign ownership (FOREIGN) was 27 percent of the firms while institutional ownership (INSTITUTION) had 16 percent. The directors' share (DIRSH) in the companies was 2.86 percent on average, although there were particular firms where directors had up to 31.12 percent of shareholding. Foreign ownership (FOREIGN) therefore appears to be the dominant ownership structure among the firms (maximum value is 88 percent). Moreover, some of the firms do not have any of the forms of ownership structure outlined. In other words, it simply shows that some firms have up to 88% foreign ownership (FOREIGN) while others even have zero. The descriptive statistics also show that there is relatively even spread, in ownership structure for the firms, especially when foreign ownership is considered. The standard deviation value is low and the skewness is quite close to zero.

The risk (RISK) associated with the firms has a value of 5.77 percent on average with maximum value exceeding 121 percent. This indicates that share prices for the firms are generally not too risky, but some individual firms could have quite extensive risks. Average debt (DEBT) value is also high for the firms, but surprisingly, some of the firms did not report any debt for some of the periods in the sample. Average growth rate (GROWTH) for the firms is 0.76 percent, which is relatively low. Some firms grew at average 28.37 percent in some of the years in the sample.

## Correlation Analysis

To further examine the background behavioural patterns in the data series in the study, the ordinary correlations matrix coefficients are determined between the variables in the study. The ordinary correlation matrix analysis is conducted on the data for the main variables used in the empirical analysis. The result of the correlation tests is shown in Table 4.2 below.

**Table 4.2: Pairwise Correlation Matrix**

	SIZE	CIT	DIRSH	DIVID	DUM	EPS	FORGN	GRWTH	INSTN	PAT	RETEARN	RISK	SP
CIT	-0.23												
DIRSH	-0.47	0.04											
DIVID	-0.05	0.02	-0.04										
VALDUM	-0.03	-0.14	-0.10	-0.04									
EPS0.29	-0.25	-0.19	-0.06	0.16									
FORGN	0.23	-0.20	-0.24	-0.08	0.09	0.31							
GRWTH	-0.01	-0.02	-0.02	0.18	-0.02	0.01	0.05						
INSTN	-0.03	0.16	-0.16	0.05	-0.04	-0.09	-0.46	0.01					
PAT	-0.05	0.08	-0.08	-0.01	0.06	0.07	0.00	0.02	0.20				
RETEARN	-0.18	0.25	-0.09	-0.01	0.07	0.01	-0.11	0.00	0.36	0.78			
RISK	0.29	-0.38	-0.12	0.03	0.12	0.59	0.23	-0.02	-0.11	0.11	0.02		
SP	0.31	-0.33	-0.19	-0.03	0.20	0.83	0.26	0.03	-0.06	0.09	0.03	0.61	
SIZE	0.12	-0.23	-0.18	0.02	0.12	0.31	0.05	0.12	0.04	0.15	0.09	0.22	0.25

Source: Author's computation (2016)

The correlation matrix for the variables indicates that dividend payout has a rather weak correlation with all the other variables in the study. The correlation values are really low and indicate that one-on-one relationship of the variables with dividends is generally weak for the entire sample. As expected, PAT had 0.78 values, a high positive relationship with retained earnings, while share price also had 0.61 values, a high positive relationship with risks.

Also, earnings per share have a high positive correlation with both share price and risks. This is also to be expected. A relatively high negative correlation between directors' share and age of the company is found, suggesting that older firms tend to have lesser directors' share participation. It seems that as firms aged over time, with directorship having to change, the share of the directors in shareholding tends to reduce. Another interesting outcome of the correlations is the relatively high negative correlation between the other ownership structure (foreign and institutional ownership factors). This indicates that when one is rising the other is falling. There seems to be a kind of trade-off or substitutability between the two ownership patterns; companies with more foreign ownership tend to have less institutional ownership. In all, the correlation matrix results show that the variables for regression with low probabilities of autocorrelation can be conveniently used.

## Econometric Analysis (The Panel Models)

The standard test for the method of panel data analysis adopted is the Hausman test for random effects. Since the biases in the pooled data could either come from cross sectional heterogeneity or time series (periodic) changes, the Hausman test (not reported) is conducted to determine the best effects model to be adopted. The Chi-square statistic values for each of the models was significant. From the results, the statistic provides little evidence against the null hypothesis that there is no misspecification when the random effect model is employed for the estimates in values. Hence, the best method to apply for the model estimation is the Random-effect strategy.

## Estimation with Tax and Cash Flows Related Factors

The first set of analysis of the results is the estimation of the aggregate behaviour of dividend payout in the face of changes in tax and cash-flow related factors. Another set of analysis (in the next section) deals with agency cost factors. Though the Hausman test has shown that the Random Effect (RE) estimates are more appropriate in the estimations for the sake of robustness checks fixed effects estimate is included. The result of the estimates of the initial model with basic cash-flow factors is reported in Table 4.3.

In the random effects (RE) estimates, the goodness of fit is impressive, with the R-squared value of 0.73, indicating that over 73 percent of the systematic variations in dividend payout is captured in the model. The adjusted R-squared value of 0.71 percent is also very high and it implies that the model has a very high predictive ability. The F value of 56.25 for the result is also high and easily passes the significance test at the 1 percent level. This suggests a significant relationship between dividend payout and all the independent variables combined.

The results in Table 4.3 are the equation that includes corporate taxes in the analysis since tax effect is one of the main objectives of the study. The lag of profit after tax (PAT) is also included in the model. The adjusted R squared value did not change even with the addition of these variables in the model. This suggests that the variables may play only marginal roles in the determination of dividend payout for the companies. Indeed, the coefficient of company income tax (CIT) in the result, fails the significance test at the 5 percent level. This result indicates that tax liabilities of the firms in the study do not have significant impact on their dividend payout. Rising taxes may not affect how firms plan their dividend policy in the current period. While this result agrees with the finding of Mbuvi (2015) though not significant, it however disagrees with those of Odia and Ogiedu (2013) and Oyinlola and Ajeigbe (2013) who found negative relationship between tax and dividend policy.

The addition of the lagged profit after tax (PAT) variable renders the coefficient of both current and lagged PAT to become positive. Although, this result is in line with existing theory and findings that previous year's profit and previous year's dividend influence current year dividend payouts. Note however, that both coefficients are not significant. The implication of this result is that profit levels do not play significant roles in explaining dividend payout for the firms. As usual, the coefficient of earnings per share (EPS) is significant and negative, while that of lagged dividend is positive and significant.

**Table 4.3: Result with Taxes (Dependent Variable = LDIV)**

Variable	Fixed Effects (FE)			Random Effects (RE)		
	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.
C	8.070	9.79	0.00	3.495	7.23	0.00
PAT	-0.001	-0.70	0.49	0.000	0.48	0.63
PAT <sub>t-1</sub>	-0.001	-0.02	0.99	0.001	0.67	0.50
CIT	0.003	0.75	0.46	0.000	0.16	0.87
EPS	-0.101	-3.11	0.00	-0.095	-4.79	0.00*
RETAINEDR	0.001	0.02	0.98	0.035	2.08	0.04**
LDIV <sub>t-1</sub>	0.196	2.37	0.02	0.658	14.65	0.00*
R-squared	0.934			0.730		
Adj. R-squared	0.902			0.717		
F-statistic	29.75			56.25		

Source: Author's computation (2016)

Note: \*1% level of sig; \*\* 5% level of sig.

Again, on the cash-flow and tax models, a dummy is included to show the change in the market value of the firm as well as the retained earnings variable in the equation. The result of the estimate is shown in Table 4.4. In the result, the adjusted R squared value shows that 70 percent of variations in dividend payout is explained in the model. Moreover, the F value of 40.95 passes the significance test at the 5 percent level. The effect of adding lagged retained earnings in the model is the same with the previous result; lagged retained earnings have a weak negative impact while current retained earnings have strong positive impact. The impact of CIT on the dividend payout is also positive but quite insignificant in the model. Apparently, taxes do not extensively explain dividend policy behaviour of quoted non-financial firms in the Nigerian Stock Exchange.

**Table 4.4: Effects of Tax and Changes in Market Value (Dependent Variable = LDIV)**

Variable	Fixed Effects (FE)			Random Effects (RE)		
	Coeff.	t-Stat.	Prob.	Coeff.	t-Stat.	Prob.
C	7.912	9.77	0.00	3.499	7.23	0.00
PAT	-0.001	-0.90	0.37	0.000	0.39	0.70
PAT <sub>t-1</sub>	0.000	0.08	0.93	0.000	0.77	0.44
CIT	0.004	1.01	0.32	0.001	0.31	0.76
RETAINED	-0.008	-0.32	0.75	0.038	2.21	0.03**
RETAINED <sub>t-1</sub>	-0.033	-2.08	0.04	-0.016	-1.21	0.23
EPS	-0.115	-3.51	0.00	-0.112	-5.43	0.00*
DIV <sub>t-1</sub>	0.203	2.51	0.01	0.631	13.80	0.00*
VALDUM	0.129	1.62	0.11	0.184	2.60	0.01**
R-squared	0.939			0.727		
Adj. R-squared	0.908			30.23		
F-statistic	0.709				40.95	

Source: Author's computation (2016)

Note: \*1% level of sig; \*\* 5% level of sig.

With respect to the change in the firm's market value, the coefficient is positive and significant at the 5 percent level. This shows that an improvement in the market value of a firm tends to also increase the dividend payout by the firm in that period while a fall in the value leads to reduction in dividend payout for the period. This outcome is rather interesting considering that market value could impair dividend policy of firms for a number of reasons. The result suggests a strong positive relationship between dividend and stock market performance of a firm. Although causality has not been tested in this study, the argument that dividend announcement tends to affect stock prices may be a reason for the results in this model. The examination of the effects of dividend on stock prices is provided further for better clarifications.

## Tax, Agency Cost and Dividend Policy

Finally, the effects of agency cost and general activities of the firms on dividend payout are estimated. In the result presented in Table 4.5, agency costs, transaction costs, tax effects and other effects are included in the model. This is to present a more behavioural basis for explaining tax cum agency costs effects on dividend policy among Nigerian non-financial companies. In the results, the diagnostic tests are generally low. The adjusted R squared value of 0.232 indicates that just 23 percent of the variations in dividend policy were captured in the model. However, given that the data set used is a panel the outcome of the adjusted R squared may not pose estimation threats to the results (Madalla, 2004; Wooldridge, 1994). The F value of 2.38 in the model however passes the significance test at the 5 percent level given the probability of zero. This shows that

a significant positive relationship exists between the dependent variable and all the independent variables combined.

**Table 4.5: Effects of Tax, Agency and Transaction Costs (Dependent Variable = LDIV)**

Variable	Coefficient	t-Statistic	Prob.
C	4903107	2.90	0.00
AGE	-75209	-1.45	0.15
CIT	0.0042	0.16	0.87
DEBT	-0.0006	-0.13	0.89
DIRSH	-33893.9	-1.29	0.20
EPS	51190.1	1.00	0.32
FOREIGN	-7687646	-2.17	0.03**
GROWTH	68758	2.05	0.04**
INSTITUTION	-6900360	-3.03	0.00*
PAT	-0.0003	-0.07	0.95
RISK	10751	1.29	0.20
SP	-6795	-2.75	0.01**
SIZE	0.0041	1.19	0.24
VALDUMMY	73066	0.43	0.67
R-squared	0.40		
Adjusted R-squared	0.232		
F	2.38 (0.0)		

Source: Author's computation (2016); Note: \*1% level of sig; \*\* 5% level of sig.

The individual coefficients of the variables in the model report quite interesting outcomes. The coefficient of the three agency cost variables (DIRSH, INSTITUTION, FOREIGN) are all negative with those of INSTITUTION and FOREIGN passing the test at 1 percent and the 5 percent levels while that of DIRSH failed the significance test. This result suggests that generally, agency cost in the firms tends to reduce dividend payments by the firms. Larger proportions of institutional and foreign ownership in non-financial firms lead to a fall in dividend payout by management. This result therefore does not support the assertion that rising agency cost would lead to increase in outlay of the firms for dividend purposes. In another sense and since the agency factors used in the study are institutional and foreign (that appear to be the most advanced and knowledgeable section of the principals), the results may indicate that more organized agents tend to put less premium on dividend payout by the firms. Indeed, the category of ownership used could be classified as the high tax brackets who according to Glen, Karmokolias, Miller and Shah (1995) may be more willing to sacrifice higher dividends for more value of their stakes in the companies. This result however does not seem to agree with those of Lintner (1956), Lambert, Lanen and Larcker (1989), and DeAngelo and DeAngelo (1990) who found positive relationship between agency costs and dividend policy of firms.

The coefficient of the transaction cost variables (DEBT, RISK) both fail the significance test at the 5 percent level. This indicates that transaction costs do not have strong effect on dividend policy of the firms. As with the other estimations, tax coefficient fails the significance test at the 5 percent level; again, confirming that current year corporate taxes do not have significant effect on dividend for the sampled firms, agreeing with that of Al-Malkawi (2008) but disagreeing with the findings of Al-Yahyaee, Pham and Walter (2006)

The coefficients of stock price and firm growth are significant in the result. Firm growth is seen to have significant impact on dividend payout. This shows that growing firms tend to payout more dividends than firms with little prospects for growth. This is contrary to theory. This may be as a result of the fact that growing firms are usually firms that may require more investment and they tend to pay higher dividends to encourage a wide range of investors. Stock prices have a negative coefficient, suggesting that rise in stock prices may actually limit the firm's dividend pay. This result is not at variance with the earlier findings since the initial results suggested that it is the rate of change in share price, and not the share price itself that positively affects dividend payout.

### Restriction Test (WALD)

Finally, whether individual patterns of taxes or agency costs have different explanations for dividend payout for the companies is determined. Based on the baseline regression for dividend payout in Table 4.3, restrictions are imposed on the coefficients of the exogenous variables in order to observe whether a significant difference exists in terms of the relationships among the independent variables. The restrictions are imposed by hypothesizing that the coefficients of tax and agency/transaction costs used in the study are similar in the determination of dividend policy. In order to implement this strategy, the Wald test of coefficient restrictions is conducted with the hypothesis that there is no significant difference in the impact of a combination of tax or agency cost factors in the movements or variations in dividend payout for the sample. The result of the Wald test is presented in Table 4.6. It should be noted that the Wald test statistic is an approximation of the Chi-square statistic since multiple testing analysis is done (Johnston & DiNardo, 1997), and the F-values are also reported. Therefore, the tests are based on the Chi-square inferential analysis.

In the test, the null hypothesis of no significant difference between the effect of tax and transaction costs on dividend payout for the firms is rejected since the Chi square test and F-test are significant at the 5 percent level. This therefore indicates that the effects of taxes and transaction costs on dividend payout are quite different. Thus, dividend payout could differ across the companies based on their tax liabilities or transaction costs. The distinction between agency and transaction costs in terms of their effects on dividend payout fails the significance at the 5 percent level. This indicates that the effect of transaction cost and agency cost are similar on dividend payout by the firms. Finally, the result for overall difference between taxes, agency costs and transaction costs is significant and the null hypotheses of no difference in their effects on dividend payout are rejected. Thus, taxes do not have the same effect on dividend policy as agency costs or transactions costs do. The results from the estimation confirm these outcomes, namely, the effect of taxes is weak, but that of agency cost is significant.

**Table 4.6: Wald Test Result for Coefficient restriction**

Variable for Test Hypothesis	Chi-Square	Prob	F-value	Prob
<i>Tax – transaction cost</i>	12.7	0.00	6.72	0.00
<i>Agency cost – transaction cost</i>	0.40	0.53	0.40	0.53
<i>tax - Agency cost – transaction cost</i>	2.07	0.03	5.21	0.03

*Source: Author's computation (2016)*

### Conclusion and Policy Recommendations

Taxes and agency costs are veritable components that exert considerable effects on management decisions, in terms of relating with government or with shareholders in the

company. This effect is none-the-least important when considering dividend policy decisions in the firm. In this study, the tax-adjusted model of dividend policy has been adapted to address this issue for non-financial firms in the Nigerian context. Hence, 48 active non-financial firms on the Nigerian Stock Exchange were selected as sample for the empirical study for the period covering 2008 to 2015 (8 years). Both statistical and econometric techniques were adopted in the analysis of the data as well as for investigating the hypotheses of the study. In particular, the Panel data technique was used in the estimation of the models specified in the model.

The study highlights two general outcomes on dividends, taxes, and agency costs. The first is that corporate taxes do not have a strong effect on dividends. The study finds that such impact is very weak and ineffective in determining dividend payout among the sampled firms. The second key result is that agency costs may actually be quite potent among manufacturing or non-financial firms. Apparently, potential conflicts possibly emanating from increased cash flows in the companies have strong impacts on dividend policy among the firms.

Again, the sources of agency conflict in relation to dividend policy have been shown to vary quite extensively. The study has suggested that costs that could emanate from agency conflict with directors (who are regarded as internal agents) do not actually have serious outcomes on dividend policy of the firms. Rather, it is the costs that emanated from possible conflict with other shareholders (external agents) that generate enough forces to change dividend policy at any given time. Thus, it is argued in this study that apart from preferences of owners, their position in relation to direct contact with the companies is the most important agency cost factor in directing dividend policy of the firms.

On the side of the managers, one interesting outcome is that dividends rise with higher cash flows. This evidence suggests that stockholders could actually be using dividends to mitigate agency conflicts. This was confirmed by the strong relationship between changes in firm market value and dividend payout in the study.

The study has therefore confirmed that corporate dividend policy depends strongly on agency costs, but not on current corporate taxes. These two opposing dividend determinants do not tend to interact with each other effectively in the Nigerian case. Apparently, investors organize their ownership in ways that allow them to capture the agency benefit of dividends at the lowest possible tax cost.

One of the challenges facing financial managers and board of directors is establishing an optimal dividend policy. Where managers are well informed and equipped, they can make a very sound dividend policy decision that would lead the company into rapid growth and attract more investors. For instance, it is known that in the stock exchange, there are different types of client according to their consumption/savings preferences: there are also those that need immediate dividend for consumption and there are also those that do not want immediate dividend, because of capital gains in the future. This study confirmed this assertion in its empirical finding that institutions and foreign investors tend to place less premium on dividend payout by the firms. Stock brokers could use this model formulated in this study to identify stocks for the needs of the different client groups. Thus, as Ashamu, Abiola and Bbadmus (2012) noted, the decision to pay dividend does not reside with the board of directors alone, but also with the shareholders' since they are directly affected by the effect of the policy decisions. Their cooperation with the board of directors in this regard leads to a fair decision corporate dividend policy which could help in ensuring the growth and development of the companies and the Nigerian economy in a more positive way.

## Policy Recommendations

Based on the results from this study, a major recommendation of this study is that tax implications involved in dividend policy formulation should be given adequate attention. Since taxes do not play effective role in dividend policy, the firms should focus more attention on ways of increasing earnings and improving market value for expanding dividends. More importantly, there should be more awareness of shareholders' preferences and influences in the determination of dividends rather than excessive focus on government-induced corporate tax influences.

Secondly; the strong indications of expectations as a factor in explaining dividend policy in non-financial firms poses strong relational changes between the management and shareholders. There is need to manage shareholders' expectations by presenting valid and reliable information on the financial status of the firms to shareholders on time in order to help the shareholders form realistic expectations about the firm's dividend policy. When information is bereft of realistic components about financial positions and wrong expectations are formed by the shareholders, then the positive effects of previous dividend on firms' dividend policy may not be achieved.

Finally, since the agency cost variables were positive and significant in the result, with larger proportions of institutional and foreign ownership in non-financial firms leading to a fall in dividend payout by management. It therefore follows that shareholders, managers and relevant authorities should evolve such policies that will encourage both directors, institutional and foreign ownership of firms (in terms of shareholdings) who are more inclined to adding value to the firm in terms of preference to retained earnings that are tax free than paying out dividend to shareholders. These groups of investors are usually regarded as those in the high tax-income bracket.

## References

- Adediran, S. A. & Alade, S. O. (2013). Dividend policy and corporate performance in Nigeria. *American Journal of Social and Management Sciences*, 4(2), 71-77.
- Adeyemi, S. L., & Adewale, A. A. (2004). Evaluation of the dividend practices among selected Nigerian quoted firms. *Department of Business Administration, University of Ilorin, Ilorin*, 8(1), 3-34.
- Agrawal, A. & Jayaraman, N. (1994). The dividend policies of all-equity firms: a direct test of the free cash flow theory. *Managerial and Decision Economics*, 15(2), 139-148.
- Aguenauou, S., Farooq, O. & Di, H. (2013). Dividend policy and ownership structure: evidence from the Casablanca Stock Exchange. *GSTF Journal on Business Review (GBR)*, 2(4), 116-121.
- Allen, F. & Michaely, R. (1995). Dividend policy, In R.A. Jarrow, V. Maksimovic and W.T. Ziemba (eds.), *Handbooks in Operations Research and Management Science* (pp.9). Amsterdam: Elsevier.
- Al-Malkawi, H. N. (2008). Factors influencing corporate dividend decision: evidence from Jordanian Panel Data, *International Journal of Business*, 13(2), 178-195.
- Al-Yahyaee, K., Pham, T. and Walter, T. (2008, May). *Dividend policy in the absence of taxes*. Paper presented at the 7th Annual Conference, Globalised Labour & Capital Markets, National Resources & Shifts in Economic Power, University of Economics, Prague. Retrieved from <http://centerforpbefr.rutgers.edu/2007/Papers/025-Dividend%20Policy%20in%20the%20Absence.pdf>
- Amitabh, G. & Charu, B. (2010). The determinants of corporate dividend policy, decision. *International Journal of Interdisciplinary and Academic Research*, 37(2), 63-78.
- Andres, C., Betzer, A & Goergen, M (2012). *Dividend policy, corporate control and the tax status of the controlling shareholder (Schumpeter Discussion Papers No. 2012-005)*. Germany: Schumpeter School of Business and Economics.

- Baker, H., Mukherjee, T & Paskelian, O (2005). *How Norwegian managers view dividend policy* (W/P No. 48). New Orleans: Department of Economics and Finance.
- Baker, H. & Farrelly, G. (1988). Dividend Achievers: A Behavioral Look. *Akron Business and Economic Review*, 19(1), 79-92.
- Baker, H. K., Farrelly, G. E. & Edelman, R. B. (1985). A survey of management views and Dividend Policy. *Financial Management* (Autumn),14(3), 78-84.
- Baker, H. & Powell, G. (2000). Determinants of corporate dividend policy: a survey of NYSE firms. *Financial Practice and Education*, 10(29), 1082-1098.
- Barabás, Z. & Fazakas, G. (2010). Tax implications of dividend policy, Corvinus. *Journal of Sociology and Social Policy*, 1(2), 51–79.
- Berman, M.D (1977). Short-run efficiency in the labour-managed firm. *Journal of Comparative Economics*, 1(3), 309-314.
- Berzins, J., Bøhren, O. & Stacescu, B. (2013). *Dividends, taxes, and agency costs*, Center for Corporate Governance Research (W/P No. 2/2013).Oslo, Norway: CCGR
- Black, F & M Scholes, (1974). The effects of dividend yield and dividend policy on common stock prices and returns. *Journal of Financial Economics*, 1(1), 1-22.
- Black, F. (1976). The dividend puzzle. *Journal of Portfolio Management*, 2(1), 5-8.
- Brealey, R.A., Myers, S.C. & Marcus, A.J. (2008). *Fundamentals of corporate finance* (6th ed.).New York, NY : McGraw-Hill.
- Brigham, E.F. (1992). *Fundamentals of financial management* (Sixth ed.). USA: The Dryden Press Orlando.
- Callen, T., Morling, S. & Pleban, J. (1992). *Dividends and Taxation: A Preliminary Investigation* (Research Discussion Paper No. 9211). Australia: Economic Group Reserve Bank of Australia.
- Chawla, P. K. & Chadha, N. (2014). A comparative analysis of dividend payout trend of Indian Telecom and steel industries. *Shiv Shakti International Journal of Interdisciplinary and Academic Research*, 3(1), 58-73.
- Chichi, O. A. & Ezeji, C. E. (2013). A Comparative analysis of the impact of corporate taxation on company's reserve and dividend policy in Nigeria: 2000-2011. *Developing Country Studies*, 3(1), 154-161.
- Conroy, R., Eades, K. & Harris, R. (2000). A test of the relative pricing effects of dividends and earnings: Evidence from simultaneous announcements in Japan. *The Journal of Finance*, 55(3), 1199-1227.
- DeAngelo, H. & DeAngelo, L. (1990). Dividend policy and financial distress: an empirical investigation of troubled NYSE Firms. *The Journal of Finance*, 45(5), 1415–1431.
- DeAngelo, H., DeAngelo, L & Skinner, D. J (2009). Corporate payout policy. *Foundations and Trends in Finance*, 3(2-3) , 95-287.
- Duke, S. B., Ikenna, D.N. & Nkamare, S. E. (2015). Impact of dividend policy on share price valuation in Nigerian Banks. *Archives of Business Research*, 3(1), 156-170.
- Easterbrook, F. H. (1984). Two agency-cost explanations of dividends. *The American Economic Review*, 74(4), 650-659
- Ehigiamusoe, U.Y. (2013). The nexus between tax structure and economic growth in Nigeria: A prognosis. *Journal of Economic and Social Studies*, 4(1), 113-38.
- Ehikioya, B. I. (2015). An empirical investigation of the impact of dividend policy on the performance of firms in developing economies: Evidence from listed firms in Nigeria. *International Journal of Finance and Accounting*, 4(5), 245-252.

- Fodio, M. I. (2009). The dividend policy of firms quoted on the Nigerian stock exchange: An empirical analysis. *African Journal of Business Management*, 3 (10), 555-566.
- Glen, J.D., Karmokolias, Y., Miller, R.R. & Shah, S. (1995). *Dividend policy and Behaviour in emerging markets: To pay or not to pay* (IFC Discussion paper No. 26). Washington DC: International Finance Corporation.
- Guilford, J.P & Fruchter, B (1973). *Fundamental statistics in Psychology and Education*, New York; London: McGraw-Hill, 1973.
- Gul, S., Khan, M.B., Ahmad, B., Rehman, S.U. & Shah, M. (2012). Taxes and dividend policy (the case of Pakistan). *Research Journal of Finance and Accounting*, 3(10), 115-121.
- Hassan, A., Tanveer, M., Siddique, M. & Mudasar, M. (2013). Tax shield and its impact on corporate dividend policy: Evidence from Pakistani Stock Market. *iBusiness Scientific Research*, 5(04), 184-188.
- Jagannathan, M., Stephens, C.P. & Weisbach, M.S. (2000). Financial flexibility and the choice between dividends and stock repurchases. *Journal of Financial Economics*, 57 (3), 355-384.
- Jensen, M.C. & Meckling, W. H. (1976). Theory of the firm: Managerial Behavior, Agency costs and ownership structure. *Journal of Financial Economics*, 3 (4), 305-360.
- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance and takeover. *American Economic Review*, 76(2), 323-329.
- Jensen, G. R., Solberg, D. P. & Zorn, T. S. (1992.). Simultaneous determination of insider ownership, debt, and dividend policies. *Journal of Financial and Quantitative Analysis*, 27(2), 274-263.
- Johnston, J. & DiNardo, J. (1997) *Econometric Methods* (Fourth Edition). New York, NY: The McGraw-Hill Companies, Inc.
- Kajola, S. O., Adewumi, A. A. & Oworu, O. O. (2015). Dividend pay-out policy and firm financial performance: Evidence from Nigerian listed non-financial firms. *International Journal of Economics, Commerce and Management United Kingdom*, 3(4), 1-13.
- Lambert, R.A., Lanen, W.N. & Larcker, D.F. (1989). Executive stock option plans and corporate dividend policy. *Journal of Financial and Quantitative Analysis*, 24(04), 409-425.
- Lintner, J. (1956). Distribution of incomes of corporations among dividends, retained earnings and taxes. *American Economic Review*, 46 (2), 97-113.
- Madalla, G. S. (2004). *Econometrics*, New York: McGraw-Hill.
- Maladjian, C. & El Khoury, R. (2014). Determinants of the dividend policy: An Empirical study on the Lebanese listed banks. *International Journal of Economics and Finance*, 6(4), 240-256.
- Manos, R. (2002). *Dividend Policy and Agency Theory: Evidence on Indian Firms* (W/P No. 41). UK: Institute for Development Policy and Management, University of Manchester.
- Mbuvi, J. N. (2015). Effect of dividend policy on value creation for shareholders of companies listed in the Nairobi securities exchange. *Journal of Economics and Finance*, (6)2, 35-41.
- McGrattan, E. R. & Prescott, E. C. (2005). Taxes, regulations, and the value of U.S. and U.K. corporations. *Review of Economic Studies*, 72(3), 767-796.
- Miller, M. H. & Modigliani, F. (1961). Dividend policy, growth and valuation of shares. *Journal of Business*, 34(4), 411-433.
- Miller, M. & Scholes, M. (1982). Dividend and taxes: Some Empirical Evidence. *Journal of Political Economy*, 90(6), 1118-1141.

- Mohd, M., Perry, L. & Rimbey, J. (1995). An investigation of dynamic relationship between agency theory and dividend policy. *The Financial Review*, 30(2), 367-385.
- Mookerjee, R., (1992), An empirical investigation of corporate dividend pay-out behaviour in an emerging market. *Applied Financial Economics*, 2(4), 243-246.
- Morgan, G. & Thomas, S. (1998). Taxes, dividend yields and returns in the UK equity market. *Journal of Banking & Finance*, 22(4), 405-423.
- Moscu, R. R. (2012). Determinant agents analysis of dividend policies practiced by companies listed in great Britain and France. *Revista Românã de Statisticã Trim, Supliment*, I(2012),28-34.
- Naceur, S., Goaid, M. & Belanes, A. (2006). On the determinants and dynamics of dividend policy. *International Review of Finance*, 6(1), 1-23.
- Nicol, R. (1991). *The dividend puzzle: An Australian solution?* Paper presented to the 52nd Annual Research Lecture Australian Society of Certified Practicing Accountants, Australia. Retrieved from [https://digitised-collections.unimelb.edu.au/bitstream/handle/11343/24117/288969\\_UDS2012208-37.pdf?sequence=1](https://digitised-collections.unimelb.edu.au/bitstream/handle/11343/24117/288969_UDS2012208-37.pdf?sequence=1)
- Nguyen T. X. T. (2012). Determinants of dividend policy: the case of Vietnam. *International Journal of Business, Economics and Law*, 1(2), 48-57.
- Nigeria Fiscal Guide (2013 and 2014). *Tax*, 1-9.
- Nwidobie, B. M. (2013). Agency conflict and corporate dividend policy decisions in Nigeria. *Asian Economic and Financial Review*, 3(8), 1110-1121.
- Nyor, T. & Adejuwon, A. (2013). What accounts for dividend payment in Nigerian banks. *International Journal of Business, Humanities and Technology*, 3(8),123-132.
- Odia, J. O & Ogiedu, K. O (2013). The effect of corporate taxes on dividend policy of banks in Nigeria. *Research Journal of Finance and Accounting*, 4(5), 138-144.
- Osegbue, I. F., Ifurueze, M. & Ifurueze, P. (2014). An analysis of the relationship between dividend payment and corporate performance of Nigerian banks. *Global Business and Economic Research Journal*, 3(2), 75-95.
- Oyinlola, O.M. & Ajeigbe, K.B. (2013). The impact of dividend policy on stock prices of quoted firms in Nigeria. *International Journal of Economics, Commerce and Management*,11 (9), 1-17.
- Pandey, I.M. (2010). *Financial management (Tenth ed.)*, New Delhi, India: Vikas Publishing House PVT Ltd.
- Rozeff, M. S. (1982). Growth, beta and agency costs as determinants of dividend payout ratios. *The Journal of Financial Research*, 5(3) , 249-259.
- Schooley, D. K. & Barney, L. D. (1994). Using dividend policy and managerial ownership to reduce agency costs. *Journal of Financial Research*, 17(3), 363-373.
- Sheikh, T. A. (2012). Determinants of dividend payout policy: Evidence from Bangladesh. *International Journal of Economic Practices and Theories*, 2(3), 119-126.
- Shleifer, A. & Vishney, R. W. (1986). Large shareholders and corporate control. *Journal of Political Economy*, 94(3), 461-488.
- Toby, A. J (2014). Empirical test of the dividend policy irrelevance hypothesis in the Nigerian context, *Research Journal of Finance and Accounting*, 5(6), 167-178.
- Uwuigbe, O. R (2013). Determinants of dividend policy: A study of selected listed firms in Nigeria. *Manager, Change and Leadership*, 17(1), 107-119.

- Uwuigbe, U., Jafaru, J. & Ajayi, A. (2012). Dividend policy and firm performance: A study of listed firms in Nigeria. *Accounting and Management Information Systems*, 11(3), 442- 454.
- Waswa, C. W. (2013). *Analysis of determinants of dividend payout by agricultural firms listed on the Nairobi Security Exchange* (Master's Thesis, The School of Business of Kenyatta University, Nairobi, Kenya). Retrieved from <https://pdfs.semanticscholar.org/8339/c9d61d032b4c81571744d856b1f55ffd3949.pdf>
- Wooldridge, J. M. (1994), Estimation and inference for dependent processes. In R. F. Engle and D. L. McFadden (Eds.), *Handbook of Econometrics*(pp.2639-2738). Amsterdam, North- Holland: Elsevier.
- Zameer, H., Rasool, S., Iqbal, S. & Arshad, U. (2013). Determinants of dividend policy: a case of banking sector in Pakistan. *Middle-East Journal of Scientific Research*, 18(3), 410-424.
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