

**East Africa Collaborative Ph.D. Program
in Economics and Management**

**Impact of Dividend Policy on Shareholders'
Wealth: A Study of the Agriculture
Industry in Nigeria**

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Preface

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Impact of Dividend Policy on Shareholders' Wealth: A Study of the Agriculture Industry in Nigeria

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Abstract

The existence of information asymmetry, agency problems, taxes and transaction costs makes dividend policy the most controversial of the three corporate decisions that managers have to take (investments, financing and dividends). However, some researchers believe that the level of dividend affects shareholders' wealth. Further, as there is a need for investible funds in the agricultural sector in Nigeria for transforming various developmental parameters (employment, foreign exchange, capital inflows) into economic growth and development this study investigates whether dividends affect the agricultural firms' shareholders' wealth in Nigeria. It uses the ex-post facto research design to collect data and the results of a multiple regression of ordinary least square (OLS) show that a unit change in earnings per share (EPS), dividend per share (DPS), dividend pay-out (DPO) and price-earning (P/E) leads to 11, 25, 68 and 32 per cent positive increase in MPS respectively. The results also show that without paying dividends, firms' MPS will fall by 43 per cent; this shows the relevance of paying dividends by stock market firms in Nigeria. Further, 73 per cent of the changes in the dependent variable (MPS) are explained by changes in independent variables. Therefore, this study recommends that firms, especially those operating in infant industries like agriculture, should ensure that they have good and robust dividend policies in place. This will enhance their profitability and attract investments to the sector.

Keywords: Dividend, agriculture, profitability, asymmetry and investment.

1. Introduction

In financial theory an argument about the irrelevance of corporate dividend policies in perfect capital markets has been very important but there is much controversy about dividend policies in the real world where market imperfections exist. The presence of information asymmetry, agency problems, taxes and transaction costs all make a dividend policy matter. A large body of theoretical and empirical research has attempted to identify the determinants of corporate dividend policies. To date, however, there is no consensus about what factors affect corporate payout policies. The issue gets even more complicated when it comes to emerging markets (Joshi, 2011; Ojeme et al., 2015; Sarwar, 2013).

Following Walter and Gordon's (1959) pioneering dividend relevance hypothesis, financial economists have advanced a number of contradicting theories to explain why corporate dividend policies matter in practice. Some theories have been developed around the proposition that dividend policies are irrelevant due to the existence of differential taxes (Adediran and Alade, 2013; Barclay, 1995; Miller and Modigliani, 1961). Others like Pettit (1976), Stulz (1992) and Monogbe and Ibrahim (2015) argue that clienteles affect dividend policies. Another dividend policy hypothesis suggests that a dividend policy is affected by other market imperfections such as information asymmetries and agency costs. The former, known as the signaling theory, predicts that firms can convey information to the market by paying dividends (Bhattacharya, 1979; Jensen, 1986; Miller and Rock, 1985). The latter, known as the agency theory, argues that dividends can reduce the costs of shareholder-manager (or controlling-minority shareholder) conflicts.

The debate between these theoretical models remains unresolved. An important observation that emerges from this literature, however, is that if a dividend policy is not irrelevant, there are many possible factors that may act as determinants of that dividend policy.

Consequently, literature has concentrated mostly on dividend policies in developed capital markets. Both the unresolved nature of the theoretical debate and the relative neglect of dividend policies in developing capital markets motivated a consideration of the potential impact that dividend policies can have on shareholders' wealth in the agriculture industry in Nigeria. Some of the pertinent problems are: Why do companies pay dividends? What actually informs the dividend policies of agricultural firms in Nigeria? What are the constraints in paying dividends and what should be an optimum dividend? Do dividends in fact matter to agricultural firms' investors? Of all the theories about dividend policies, which is the best that predicts dividend policy behavior in agricultural firms in Nigeria? Can the magnitude of the factors that influence dividend policies be used in predicting market share prices of the firms under review? Due to the growth of agricultural firms' market flows on the stock exchange, answering these questions is not easy.

The agricultural sector has been neglected not only by policymakers but also by researchers. The Nigeria Stock Exchange (NSE) Q1 2016 Fact Sheet shows that in the first quarter of 2016 the market flows for foreign transactions fell from 57.5 to 46.21 per cent thus sending a bad signal. Was the fall a result of dividend policies in the market in general? As the agricultural sector emerged the best performer at 7.46 per cent on the NSE in year ended 31 March 2016, there is a need to address the dearth in investable funds in this sector (NSE Q1,

2016 Fact Sheet). Hence, this study analyzes and evaluates long-term dividend policies using conventional and non-conventional approaches by considering informational content of the dividends declared by quoted agricultural firms in Nigeria.

The rest of this study is organized as follows. Section 2 provides a brief literature review about dividend policies of agricultural firms in Nigeria including empirical evidence. The data and methodology are presented in Section 3. Section 4 presents and discusses the results. The final section gives a conclusion and policy recommendations for agricultural firms' dividend policies.

2. Literature Review

2.1 Concept of a Dividend Policy

Brealey and Myers (2002) state that a dividend policy is among the top-10 puzzles in finance. The most pertinent questions here are: Should a firm's cash distribution effect its shareholders' holdings? Should corporations pay their shareholders through dividends or by repurchasing their shares, which is the least costly form of payout from the tax perspective? Firms must take these important decisions regularly as they form one of the key factors in decision making by investors.

Frankfurter and Wood (1997 as cited in Husam-Aldin et al., 2010) assert that corporate dividend dates back to the early 16th century in Holland and Great Britain when captains of 16th century sailing ships started selling financial claims to investors which entitled them to shares in the proceeds of the voyages. According to them, this was not an annual thing as the profits and the capital were distributed to investors at the end of each voyage thereby liquidating and ending the venture's life. However, by the end of the 16th century, these financial claims began to be traded in open markets in Amsterdam and were later replaced by shares of ownership. Diversification of risks during this period was done by buying shares from more than one captain.

According to Husam-Aldin et al., (2010), the ownership structure of shipping firms gradually evolved into a joint stock company form of business. In general, chartered trading firms adopted the joint stock form. In 1613, the British East India Company issued its first joint stock shares with a nominal value. According to Baskin (1988 as cited in Husam-Aldin et al., 2010), the successes of the ventures increased their credibility and shareholders became more confident in the management of the captains. This was accomplished by among other things, the payment of 'generous' dividends. This then became a normal practice for firms and a form of building investors' confidence in the viability of business corporations.

Generally, dividend is the return that accrues to shareholders as a result of the money invested in acquiring the stock of a given company (Eriki and Okafor, 2002). A dividend policy on the other hand is concerned with division of net profit after taxes between payments to shareholders (ordinary shareholders) and retention for re-investment on behalf of the shareholders (Kempness, 1980). A difficult decision for both public and private limited companies is determining the appropriate level of dividend to be paid to shareholders and deciding whether or not to offer non-cash alternatives such as scrip dividends. Share

price reactions on dividend announcements prompt an analysis of the evidence for both shareholder clienteles and possible interaction of a firm's dividend policies with key activities such as internal investments. An aspect of the theory of dividend policy is a part of a continuum of control allocations between managers and investors, and hence cross-sectional variations in dividend policy are driven by an underlying factor. The allocation of controls between the manager and investors is important not because of agency or private information problems but because of the potentially divergent beliefs that can lead to a disagreement about the value of the project available to the firm (Monogbe and Ibrahim, 2015).

According to Ojeme et al. (2015), the main determinants of a firm's dividend policy can be classified into:

Dividend payout ratio: The percentage share of the net earnings distributed to the shareholders as dividend.

Stability of dividends: The payment of a certain minimum amount of dividend regularly.

Legal, contractual and internal constraints and restrictions: Legal stipulations do not require a dividend declaration but they specify the conditions under which dividend must be paid. Such conditions pertain to capital impairment, net profit and insolvency. Important contractual restrictions may be accepted by a company regarding payment of dividend when the company obtains external funds. Hence, in Nigeria the Companies and Allied Matters Act 1990, Part II (379-382) provides the basis on which dividends can be paid.

Owner's considerations: A dividend policy is also likely to be affected by an owner's considerations of the tax status of the shareholders, opportunities for investments and the dilution of ownership.

Other factors affecting a firm's dividend policy according to Adediran and Alade (2013) include:

Capital market considerations: The extent to which a firm has access to capital markets also affects its dividend policy. In case a firm has easy access to capital markets, it can follow a liberal dividend policy. If a firm has only limited access to capital markets, it is likely to adopt a low dividend payout ratio. Such companies rely on retained earnings as a major source of finance for future growth.

Inflation: With rising prices due to inflation, the funds generated from depreciation may not be sufficient to replace obsolete equipment and machinery. So organizations may have to rely on retained earnings as a source of funds to replace these assets. Thus, inflation affects the dividend payout ratio on the negative side.

Subsequently, as high-risk financial assets stock investors suffer from high investment risks and share a company's operating results. According to Adesola and Okwong (2009) this is the main purpose of investors investing in stocks. The more a company distributes dividends the higher the dividend payout ratio, the more attractive it is to investors, the more conducive it is to establishing a good corporate reputation and its market value. Also, Luke (2011) states that a significant part of the returns that investors can realize from putting money into

stocks comes from dividends paid by companies. The amount of money a company pays in the form of dividend varies significantly from one business to another. Companies use their dividend policies to determine how much they will distribute.

Monogbe et al. (2015) maintain that there is a connection between dividend and retention policies. Retained earnings are important sources of finance for Nigerian companies and encourage retaining profits instead of making dividend payments. They are, therefore, an attractive source of finance for developmental projects without taking recourse to extra funds from outsiders. The belief that there is no cost associated with the use of retained earnings though is not true. It does not lead to cost involving cash payments. Thus, in periods of prosperity, the management may not be liberal in paying dividends because of availability of larger profitable investment opportunities. On the other hand, in periods of depression the management may retain a larger part of its earnings to preserve the firm's liquidity position. Thus, retained earnings avoid issue costs. However, Sarwar (2013) maintains that a company must satisfy shareholders' minimum requirements and if it is looking for extra funds this should not be seen by investors to be paying generous dividends or salaries to owners-directors.

Due to the importance of dividends for share market prices in 2011 the Nigeria Stock Exchange introduced the e-dividend system to ease payment of dividends to diverse shareholders of corporations. According to Olajide and Adewale (2011), one of the major problems associated with investing in the capital market is unclaimed dividends and unclaimed share certificates. The e-dividend system of payment is an attempt to address the delay associated with the verification of proceeds of public offers as well as the delays encountered by investors in getting returns on their investments. However, this has not had the desired impact of helping in the war against this menace. In their view when returns are not forthcoming, investors are likely to lose confidence and divest to other investment opportunities as experienced in FY 2015.

2.2 The Valuation of Shareholders' Wealth

The goal of wealth maximization is widely accepted to be the main goal of a business as it reconciles the varied, often conflicting, interests of stakeholders (Kapoor, 2009). Interest in shareholders' value is gaining momentum as a result of several recent developments in the business environment: The threat of corporate takeovers by those seeking under-valued and under-managed assets; impressive endorsements by corporate leaders who have adopted the approach; growing recognition that traditional accounting measures such as EPS and ROI are not reliably linked to the value of a company's shares; reporting of returns to shareholders along with other measures of performance in the business media; and the growing recognition that executives' long-term compensation needs to be more closely tied to returns to shareholders (Adesola and Alade, 2013; Luke, 2011; Ojeme et al., 2015; Okafor and Mgbame, 2011).

Ekpenyong (2005) maintains that a majority of Nigerian investors are willing to take risks at a reasonably high level. According to him, there is a need to foster a stable and predictable macroeconomic environment and the subsidization of investment advisory services in order

to spur Nigerian investors from having a moderate attitude towards risk taking to aggressive investment behavior. Hence, shareholders' wealth is represented by the market price of a company's common stock, which, in turn, is the function of the company's investment, financing and dividend decisions. Among the most crucial decisions to be taken for efficient performance and attaining the objectives of any organization is decisions relating to dividend. Dividend decisions are recognized as central because of the increasingly significant role of finances in a firm's overall growth strategy (Profilet and Bacon, 2013).

According to Ojeme et al. (2015), the objective of the finance manager should be finding an optimal dividend policy that will enhance the value of the firm. It is often argued that the share prices of a firm tend to reduce whenever there is a reduction in its dividend payments. Announcements of dividend increases generate abnormal positive security returns while announcements of dividend decreases generate abnormal negative security returns. A drop in share prices occurs because dividends have a signaling effect. According to the signaling effect, managers have private and superior information about future prospects and choose a dividend level to signal that private information. Such a calculation on the part of a firm's management may lead to a stable dividend payout ratio.

For investors, dividends – whether declared today or accumulated and provided at a later date -- are not only a means of regular income, but also an important input in the valuation of a firm. Similarly, managers' flexibility to invest in projects is also dependent on the amount of dividend that they can offer to shareholders as more dividends may mean fewer funds available for investments. Nevertheless, dividend payments present an example of the classic agency situation as their impact is borne by various claimholders. Accordingly a dividend policy can be used as a mechanism for reducing agency costs. Dividend payments reduce the discretionary funds available to managers for consumption and investment opportunities and require managers to seek financing in capital markets which ultimately affects shareholders' wealth (Osaze, 2007).

In addition, Mokaya et al. (2013) state that companies generally prefer a stable dividend payout ratio because the shareholders expect it and reveal a preference for it. Shareholders may want a stable rate of dividend payment for a variety of reasons. Risk-averse shareholders will be willing to invest only in those companies which pay high current returns on shares. This class of investors, which includes pensioners and other small savers, is partly or fully dependent on the dividend to meet their day-to-day needs. Similarly, educational institutions and charity firms prefer stable dividends because they will not be able to carry on their current operations otherwise. Such investors, therefore, prefer companies which pay regular dividends every year. This clustering of stockholders in companies with dividend policies that match their preferences greatly affects their market prices and by extension the wealth of shareholders.

2.3 Investments in Agriculture in Nigeria

Manyong et al.'s (2005) report, 'Agriculture in Nigeria: Identifying opportunities for Commercialization and Investment,' explains the investment situation in the Nigerian agricultural sector. The study assesses the performance of Nigeria's agriculture sector,

reviews past policies affecting agriculture, assesses investment processes in Nigerian agriculture, analyzes the constraints in private sector investments in Nigerian agriculture and evaluates investment options. The results show a mixed performance. The share of agriculture in both aggregate gross domestic product (GDP) and non-oil GDP increased only marginally in the 1981–2000 period covered in the study. The share of total bank credit going into the agricultural sector first increased rapidly between the 1981–85 and 1991–95 sub-periods and then declined in the 1996–2000 period. The share of the federal government's total capital expenditure to the agricultural sector declined almost persistently over the period. Finally, the share of the total labor force employed in the agricultural sector also declined over the period.

Generally, there was a lack of consistency in the growth performance of the agricultural sector in 1981–2000 with some evidence of unstable or fluctuating trends probably due to policy instability and inconsistencies in policies and in their implementation. Factors constraining agricultural performance in the country included technical constraints, resource constraints, socioeconomic constraints and organizational constraints. A review of past government policies in agriculture shows that in the pre-structural adjustment period, sector-specific agricultural policies were designed to facilitate agricultural marketing, reducing agricultural production costs and enhancing agricultural product prices as incentives for increased agricultural production.

Major policy instruments included those targeted at agricultural commodity marketing and pricing, input supply and distribution, input price subsidies, land resource use, agricultural research, agricultural extension and technology transfers, agricultural mechanization, agricultural cooperatives and agricultural water resource and irrigation development. Macro and institutional policies as well as legal frameworks complemented sector-specific policies. The structural adjustment period was governed largely by structural adjustment policies.

The new policy direction involved creating a conducive macro-environment for private sector investments in agriculture, rationalizing the roles of government tiers and the private sector, reorganizing the institutional framework in the agricultural sector, implementing integrated rural development programs, increasing budgetary allocations for agriculture and rectifying import tariff anomalies with respect to agricultural products. Agricultural commercialization calls for increased investments and capital formation for more intensive production. Hence, the level of commercialization and the size of investments are positively correlated.

However, agriculture's share in total foreign net private investments was very low, being on average less than 4 per cent in the entire 1981–2000 period. There were negative flows (that is, actual outflows) of foreign investments into agriculture in 1980, 1985, 1987 and 1994. Agriculture's share in cumulative foreign investments declined almost consistently in the 1981–2000 period from about 2 per cent in the 1981–85 sub-period to about 1 per cent in the 1996–2000 sub-period. The pattern of both domestic and foreign investments in Nigeria in the period under review tended to be volatile, displaying highly variable growth rates and high degrees of instability. This pattern was a direct reflection of the generally unstable investment climate in the country during the period.

2.4 Theoretical Framework

According to Mageshwari (1992 in Azahagaiah and Sabari, 2008), the optimal dividend policy of any firm, agriculture or otherwise, is the one that maximizes the company's stock price which leads to maximization of shareholders' wealth and thereby ensures more rapid economic growth in the country. What then is an optimal dividend policy for a firm? To answer this unresolved question, we explore the two key dividend theories in corporate finance.

Dividend Relevance or Irrelevance Theory

There is considerable debate on how a dividend policy affects a firm's value in both developed and developing countries. Walter and Gordon (1959) opine that dividends increase shareholders' wealth while later other researchers said that dividends were irrelevant and still others believe that dividends decrease shareholders' wealth. Despite the large body of theoretical and empirical research, no consensus has emerged.

The proponents of the dividend relevance theory (called the traditionalist or bird-in-hand proposition or a rightist approach) offer the first explanation for the relevance of dividend payments. Graham and Dodd founded this school in 1934. Later support was offered by Gordon (1962) and Brittain (1964) as they believed that dividend payments improved the market price of a company's shares and hence they believed that dividend payments were the key determinant of a firm's share price. The bird-in-hand, signaling and agency theories later postulated by researchers are all derived from the relevance theory.

On the other hand, Miller and Modigliani's (1961) theory proposes that in a capital market where there are no imperfections such as taxes, transaction costs, asymmetric information and agency costs, a company's dividend policy is irrelevant for the market value of its shares. This implies that financial managers cannot alter the value of their firm by changing its dividend policy. They showed that a firm's value is enhanced by investing in productive assets and not by the way in which income is distributed to shareholders. Thus, according to their theory, a dividend policy is irrelevant and a rational investor does not have a preference between dividend and capital gains.

Our study on the impact of a dividend policy on shareholders' wealth in agricultural firms in Nigeria strikes a balance between the relevance and irrelevance theories as it seeks to investigate whether dividend policies affect the share prices of agricultural firms.

2.5 Empirical Evidence

While many researches are available in developed countries, developing countries, particularly Nigeria, have few studies analyzing the relationship between the shareholders' wealth and dividend policy (Adediran and Alade, 2013; Adesola and Okwong, 2009; Luke, 2011; Monogbe and Ibrahim, 2015; Ojeme et al., 2015). Like the studies in developed

nations these studies too are focused on stock market firms in general even though it is believed that firms' dividend policies are dependent on their characteristics.

To determine an optimal decision between distributing profits to shareholders and retaining them for capital appreciation, our study explores empirical studies on the subject. Brealey and Myers (2002) and Ojeme et al., (2015) posit that dividend policies have been analyzed for many decades but no universally accepted explanation for companies' observed dividend behavior has been established. In fact, it has long been a puzzle in corporate finance and while literature exists in other countries (Joshi, 2011; Khan and Khan, 2011; Profilet and Bacon, 2013; Rashid and Rahman, 2006; Sarwar, 2013, among others) especially developed countries, little attention has been paid to it in Nigeria.

Monogbe and Ibrahim's (2015) study discusses dividend policies vis-à-vis financial performance in a case study of selected registered firms in Nigeria. They opine that a dividend policy serves as a mechanism for control of managerial opportunism. Data for the study was extracted from annual reports and accounts of 25 quoted companies in Nigeria. This data was subjected to a regression analysis using the Eview software and the findings indicate that there was a positive and significant association between a firm's performance and its dividend policy in the sampled firms. The study further showed that there was a strong and positive significant relationship between ROCE, investments and dividend policies while EPS showed a positive impact on a firm's dividend policy. The authors concluded that organizations should effectively appropriate funds available to them and manage them in such a way that more profit can be generated which will in turn lead to an increase in shareholders' dividends. Secondly, adequate monitoring and supervision should be undertaken by firms to ensure prudence and proper accountability.

Adediran and Alade (2015) examined dividend policies and corporate performance in Nigeria. Data for the study was got from annual reports and accounts of 25 quoted companies in Nigeria. This data was subjected to a regression analysis using the Eview software and the findings indicate a positive relationship between organizations' dividend policies and profitability. Also, there was a significant positive relationship between a firm's dividend policy and investments and there was a significant positive relationship between the dividend policy and earnings per share. The study concluded that organizations should ensure that they have good and robust dividend policies in place because these will enhance their profitability and attract investments.

This review not only reveals the scanty literature on the subject in Nigeria but also shows how neglected dividend policies in the agricultural sector may help attract investors, especially foreign investors to this mainstay of the Nigerian economy.

Manyong et al.'s (2015) study recognizes the need for investible funds in the agricultural sector to transform various developmental parameters like employment and foreign exchange in Nigeria into economic growth and development. This study is apt as the agricultural sector emerged as the best performer in the April 2015 to March 2015 period according to NSE Fact Sheet (2016).

Our study seeks to bridge the gap in literature and come up with a policy statement on whether firms' dividend policies in the agriculture sector impact their shareholders' wealth in Nigeria.

3. Research Methodology

Our study used an ex-post facto research design to collect panel data on the impact of dividend policies on shareholders' wealth in the Nigeria agriculture sector. A researcher's inability to manipulate already existing variables is a basic feature of an ex-post facto research design. The ex-post facto research design is also called causal comparative research and is used when the researcher intends to determine a cause-effect relationship between independent and dependent variables with a view to establishing a causal link between them. This is consistent with the methodologies adopted by Adesola and Okwong (2009); Joshi (2011); and Sarwar (2013).

Our study considered all the five agricultural firms listed on the Nigeria Stock Exchange as at 31 May 2016 -- Ellah Lakes Plc., FTN Cocoa Processors Plc., Livestock Feeds Plc., Okomu Oil Palm Plc. and Presco Plc. (see Appendix I for details about the firms). These firms were considered because the study deals with agricultural firms and these firms were the only ones on whom data was available for analysis for the period under review (NSE, 2016).

This study used secondary data collected from annual reports and financial statements for the five firms in the agricultural sector listed on the Nigeria Stock Exchange in the 7-year period 2009-15. This is consistent with other studies that have used companies' annual reports as their main source of data (Adediran and Alade, 2013; Luke, 2011; Ojeme et al., 2015). Information related to dividend policies (earning per share, dividend payout ratio and price-earnings ratio) and shareholders' wealth (market price per share) were collected from the sampled companies' annual reports and financial statements for the period under review.

Both descriptive statistics and a multiple regression analysis were used to analyze the following econometric model developed from the research variables:

$$(1) \quad MPS = F(DPO, EPS, PER)$$

$$(2) \quad Y_{MPS} = \beta_0 + \beta_1 DPO + \beta_2 EPS + \beta_3 PER + \varepsilon$$

In this model, the independent variables were DPO (dividend payout ratio), EPS (earnings per share) and PER (price-earnings ratio) which represent the dividend policies of the agricultural firms quoted on the Nigeria Stock Exchange as at 31 May 2016. MPS (market price per share) in the model represented the shareholders' wealth in the firms under study. This provided a justification for the theoretical underpinning of the study which stated that some shareholders preferred dividends while others preferred capital appreciation through earnings retention (opposite of dividends) (Monogbe and Ibrahim, 2015; Sarwar, 2013).

Also, from the model β_0 , β_1 , β_2 , β_3 = coefficients of the variables, and ε = other factors not considered in the study. Finally the independent variables were defined as:

$$EPS = \text{Profit after Tax} / \text{Number of Ordinary Shares in Issued}$$

$DPO = \text{Dividend Per Share} / \text{Earnings Per Share}$

$PER = \text{Market Price Per Share} / \text{Earnings Per Share}$

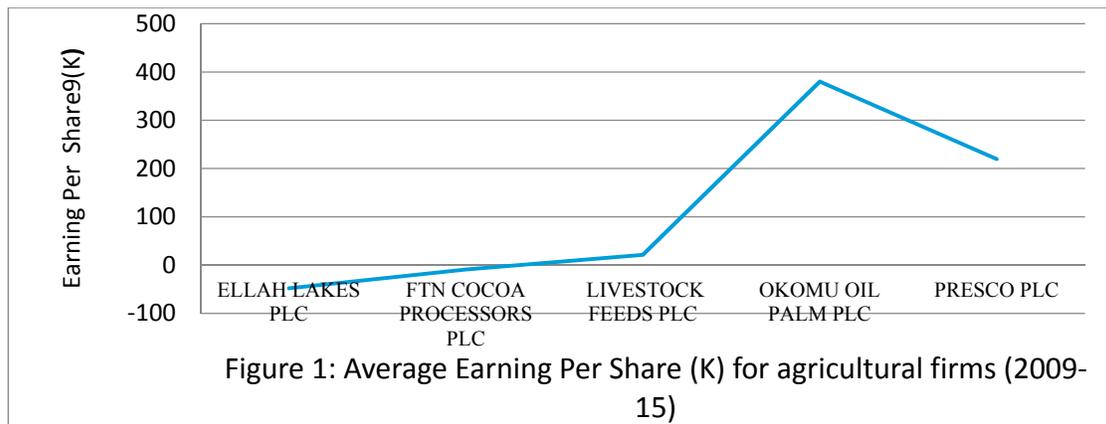
To analyze the data, the OLS technique of multiple regression was adopted.

4. Data Presentation and Analysis

This section presents the descriptive and inferential analysis of the variables in the study.

4.1 Descriptive Data Analysis

Figure 1 shows the average EPS of the firms in the Nigerian agricultural industry for the 7-year period 2009-15. The average EPS was -47.9k, -8.99k, 21.11k, 380.14k and 219.57k for Ellah Lakes, FTN Cocoa, Livestock Feeds, Okomu and Presco Plc. respectively. This implies that while Presco and Okomu Oil Palm reported higher EPS in the years under review, Ellah Lakes and FTN Cocoa were running in losses thus resulting in a negative EPS. This was partly due to the fact that the industry was in its infant stages and there was a dearth of investible funds (Manyong et al., 2005).



The average dividend per share for the five agricultural firms is given in Figure 2. In general all the companies paid at least a dividend of 5k, though this was not commensurate with the dividend in other industries of the economy like conglomerates, construction and telecommunications. Okomu Oil Palm Plc. was able to pay on average 161k throughout the period under review. This situation was a result of its higher EPS; a higher profit led to shareholders' depending on a fair dividend. Despite this unprecedented growth, Ellah Lakes, FTN Cocoa and Livestock Feeds were unable to pay comparable dividends and in some years they paid no dividend.

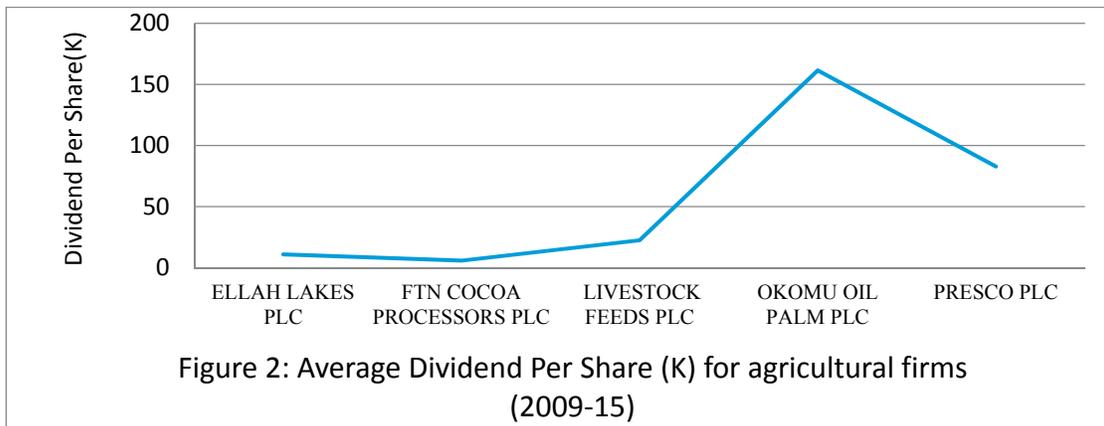


Figure 3 gives the relative relationship between EPS and DPS for the five agricultural firms. In accounting literature, the dividend payout ratio is a better measure of the relative profitability of a firm as it smoothens out the effect of a firm's size on profitability. The DPO was -0.3k, -0.2k, 3k, 0.5k and 0.4k for Ellah Lakes, FTN Cocoa, Livestock Feeds, Okomu Oil Palm and Presco Plc. respectively. This shows that for investors who preferred dividend payments instead of profit retention Livestock Feeds Plc. was a better company to invest in. This is partly attributable to the long undiluted state of the company's shares as compared to other firms in the industry.

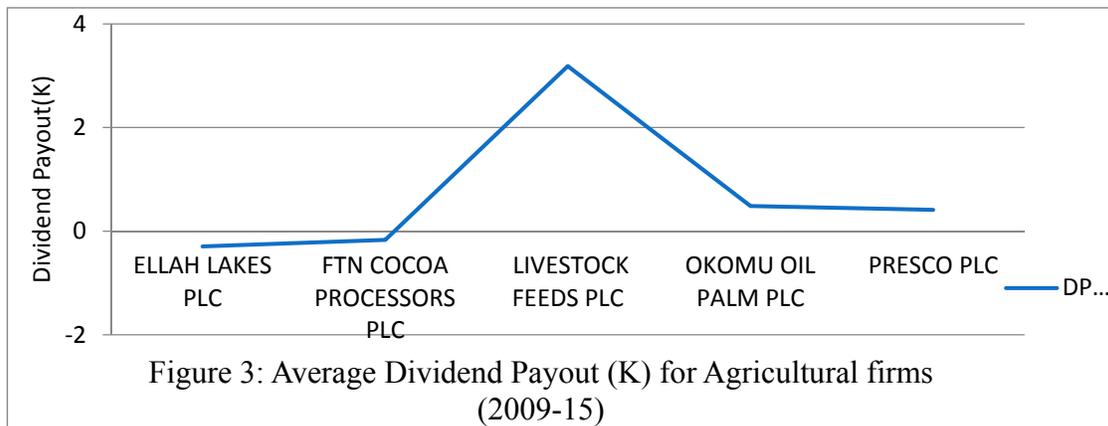


Figure 4 gives the average market prices for firms' shares during 2009-15. As seen in Figure 4, on average the MPS was 67k for Ellah Lakes, 66k for FTN Cocoa, 70k for Livestock Feeds, 24k for Okomu Oil Palm and 85k for Presco. Thus, while Okomu Oil Palm's shares had the lowest price, Presco was able to have a price approximately four times that of Okomu Oil Palm. Hence, it can be deduced that Presco and Livestock Feeds had a better price-earnings ratio as compared to the rest of the firms in the industry. However, with recent growth and interest in agriculture, this sector will experience heavy capital inflows. For risk-averse investors, Livestock Feeds and Presco serve as better investment opportunities.

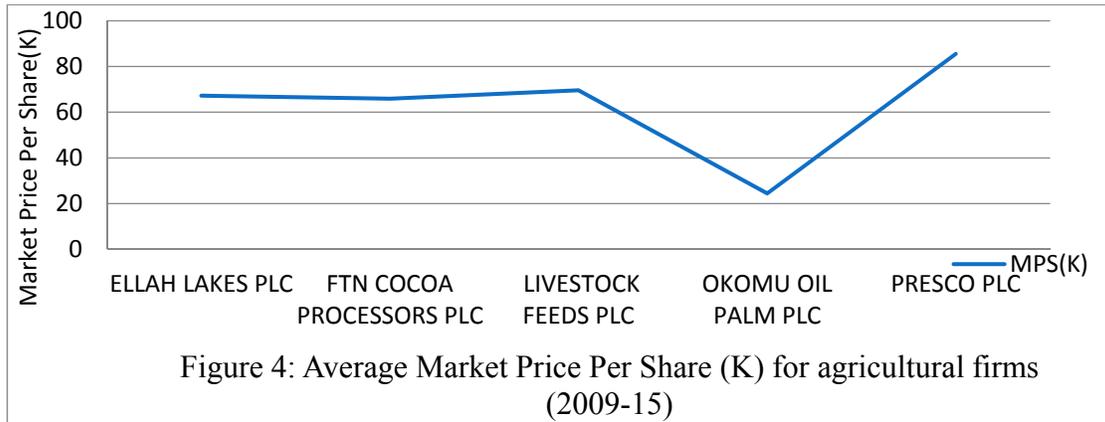


Figure 5 shows the relationship between average EPS and average DPS for the five firms. Firms' EPS and DPS had a direct relationship, that is, an increase in EPS also led to an increase in DPS and vice versa. Expectedly, Okomu Oil Palm had both higher EPS and DPS. The skewness of the curves corroborates Adediran and Alade's (2013) study which showed that firms with higher profitability (EPS) were more willing and able to distribute a part of their profits as dividend to their shareholders.

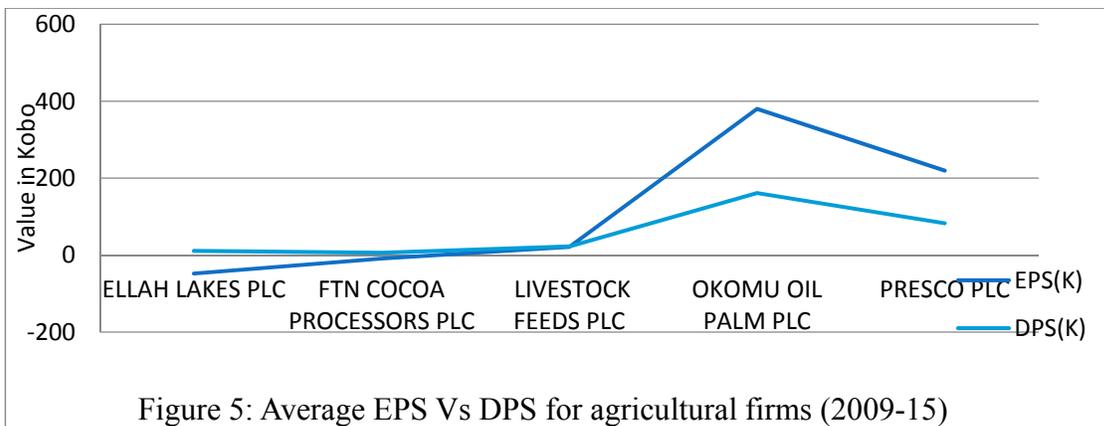


Figure 6 shows the relationship between EPS and MPS. MPS for the firms was relatively stable except Okomu's MPS which scooped over the period. However, EPS for the firms had an increasing proportion up to Okomu's EPS before it sharply fell. As seen in Figure 6 both EPS and MPS were positively related to each other implying that the published accounts and other financial information made available to the stock market impacted more on their valuation of shares. Thus, higher EPS implied higher MPS.

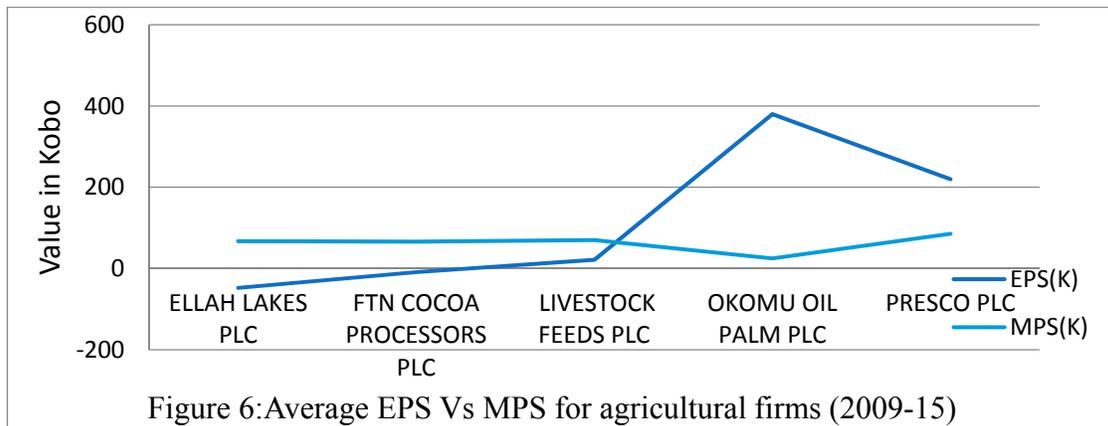


Figure 6: Average EPS Vs MPS for agricultural firms (2009-15)

Figure 7 gives the relative relationship between dividend payout and price-earnings for the five firms. Both measurements are in relative terms and are thus eliminated for any effect that they could have for the firms. The price-earnings ratio serves as a better measure of the returns that investors expect by investing in stock market companies.

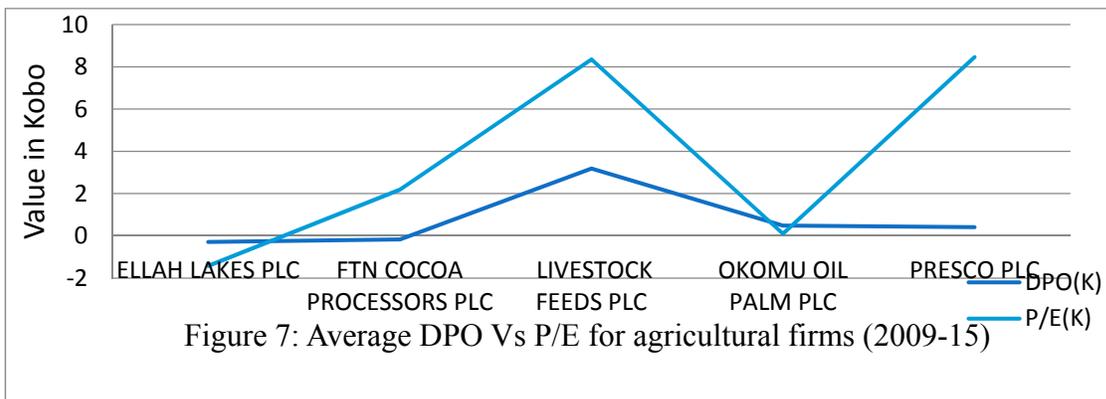


Figure 7: Average DPO Vs P/E for agricultural firms (2009-15)

As shown in Figure 7, P/E ratios were very high for Livestock Feeds and Presco Plc. and negative for Ellah Lakes. On the other hand, dividend payouts for all the firms except Livestock Feeds were relatively very low. The asymmetric directions of the curves are largely due to the size of the denominators of EPS for both P/E and DPO. In order to improve both the ratios, the firms need to aggressively improve their profitability and reduce the possibility of a dilution in their earnings.

4.2 Hypothesis Testing

The relationship between shareholders' wealth being a dependent variable and the independent variables of EPS, DPO and P/E was stated in form of an econometric model:

$$(3) \quad Y_{MPS} = \beta_0 + \beta_1 DPO + \beta_2 EPS + \beta_3 PER + \varepsilon$$

After regressing using Eview version 9, the econometric model derived was:

$$(4) \quad \text{MPS} = -1.43 + 0.11\text{EPS} + 0.25\text{DPS} + 0.68\text{DPS} + 0.31\text{P/E}$$

Appendix II gives the combined results of the multiple regression OLS on the relationship between market prices of shares and EPS, DPS, DPO and P/E. MPS decreased by 43 per cent when all other variables were held constant. Consequently, a unit change in EPS, DPS, DPO and P/E led to a 11, 25, 68 and 32 positive increase in MPS respectively. Hence, without publishing and/or paying dividends, firms' MPS fell by 43 per cent which shows the relevance of disclosing EPS and declaring dividends by stock market firms in Nigeria.

Using the T-ratio to test for statistical significance, our study found that DPO was statistically significant. This is evidenced by its observed T-value which is positive and more than the 'rule of thumb' of 2. The other variables are not statistically significant because their observed T-values are less than this rule of thumb. From the R-squared of 0.731703, the regression co-efficient indicates that about 73 per cent of the changes in the dependent variable are explained by the changes in independent variables while 27 per cent of the changes are caused by stochastic errors or variables not measured in the model. The p-value of 0.008529 shows that the regressed model is statistically significant since it is less than 0.05. Also, the DW statistic of 1.893793 indicates the absence of auto-correlation since it is in the neighborhood of the rule of thumb of 2.

Finally, the F-statistic of 227.3549 is on the higher side with a p-value for all variables less than 5 per cent. Hence, the null hypotheses are rejected in favor of alternate hypotheses which means that there is a significant positive relationship between dividend policies, corporate profitability and investments by organizations. This finding is in tandem with the findings of Adediran and Alade (2015), Adesola and Okwong (2009), Monogbe and Ibrahim (2015) and Manyong et al., (2015).

5. Summary, Conclusion and Recommendations

This study evaluated the impact of dividend policies on shareholders' wealth in the agricultural sector in Nigeria. With the recent upsurge in capital inflows to this sector, it is important both for researchers and policymakers to examine what attracts investors to the sector. Using the ex-post facto method, a systematic analysis was carried out to diagnose whether the dividend policies of these firms aligned with their shareholders' expectations, especially to answer the fundamental unresolved corporate finance question: Is dividend relevant in determining the value of a firm and thus its shareholders' wealth?

Based on a multiple regression OLS, it was found that the firms' dividend policies were a very determinable factor of their share values. The study also established that the dividend paid mattered the most in investors and shareholders' investment decisions.

The study concluded that although the industry is in its infant stages in Nigeria with few quoted companies, the firms were disclosing their profits. Only two of the firms made an average negative EPS over the period of study. This may be attributed partly to inadequate investible funds available to the industry and its uncertain operating environment. All the

firms paid dividends to their shareholders no matter how small it was. However, these dividends were far below those paid in other industries such as conglomerates, manufacturing and banks, hence leading to unavailability of investable funds as prudent investors preferred investing in businesses where dividend payments were regular and were also more.

There was a direct relationship between profitability and dividend payouts by firms. This implies that firms with higher reported profits (EPS) paid more dividends than less profitable ones. Contrary to practices in other industries where firms borrow to pay dividends, these firms relied heavily on the cash available with them. This is in consonance with the bird-in-hand proposition from a firm's perspective. Earnings per share, dividend payouts and price-earnings significantly influenced the market value of agricultural firms. This means that the amount of dividend payouts affected the shares' valuation of these firms which was also evidenced in higher T-test values.

Organizations' dividend policies have a significant positive relationship with profitability and investments among agricultural firms in Nigeria. Their dividend policies are vital in enhancing profitability and investments in the agricultural sector in the country. Hence, dividend payments are a key determinant of share prices and owners' wealth valuation of agricultural firms in Nigeria.

Based on the findings of this research and the conclusions reached, the following recommendations are made:

- Firms, especially those operating in infant industries like agriculture, should ensure that they have good and robust dividend policies in place. This will enhance their profitability and attract investments.
- Records of shareholders including their next-of-kin should be updated by directors of corporate organizations to avoid a deliberate diversion or undue retention of unclaimed dividend warrants. Due procedures for the recognition and utilization of profits arising from investments of unclaimed dividends should be effected and properly accounted for.
- Firms should develop more stringent policies that will compel directors to only invest in profitable ventures and report the utilization of retention earnings through notes to the accounts. However, the auditors must discourage creative accounting in order to stop managements from window dressing their financial statements.
- Firms should invest in companies not for short term gains of dividends but for longer term capital appreciation. Since the agricultural industry was the best performer in terms of market capitalization in 2015-16, there is hope that it holds a very promising future.
- The government should create an enabling environment for agricultural firms in Nigeria so that they can flourish through direct investments, policies and developing private-public partnerships.

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APPENDICES

APPENDIX 1: Sample Data Collected for the Study

ELLAH LAKES PLC.					
YEARS	EPS(K)	DPS(K)	DPO(K)	MPS(K)	P/E(K)
2009	-84	2.3	-0.02738	52	-0.61905
2010	-71	10	-0.14085	63	-0.88592
2011	-58	15	-0.25862	63.2	-1.08966
2012	-56	1.5	-0.02679	74	-1.32143
2013	-41	2.1	-0.05122	62	-1.51220
2014	-23	30	-1.30435	71	-3.08696
2015	-58	15	-0.25862	85	-1.46552
FTN COCOA PROCESSORS PLC.					
2009	11.8	3.5	0.296610	150	12.71186
2010	2.89	3.5	1.211073	61	21.10727
2011	-11.08	4	-0.36101	50	-4.51264
2012	-18.45	5.5	-0.29810	50	-2.71003
2013	-13	3.5	-0.26923	50	-3.84615
2014	-26	2.7	-0.10385	50	-1.92308
2015	-9	15	-1.66667	50	-5.55556
LIVESTOCK FEEDS PLC.					
2009	249	10	0.040161	74	0.297189
2010	2.36	25	10.59322	56	23.72881
2011	8.14	45	5.528256	63	7.739558
2012	12.71	30	2.360346	52	4.114870
2013	17.56	25	1.423690	71	4.043280
2014	12.71	12	0.944138	84	6.608969
2015	9.4	10	1.063830	87	9.255319
OKOMU OIL PALM PLC.					
2009	115	25	0.217391	10.3	0.089565
2010	342	30	0.087719	2.74	0.008012
2011	823	200	0.243013	14.83	0.018019
2012	753	400	0.531208	31.43	0.041740
2013	219	350	1.598174	34.08	0.155616
2014	163	100	0.613497	35.86	0.220000
2015	276	25	0.090580	42.26	0.153116
PRESCO PLC.					
2009	24	20	0.833333	783	32.62500
2010	110	50	0.454545	685	6.227273
2011	169	100	0.591716	867	5.130178
2012	349	100	0.286533	804	2.303725
2013	134	10	0.074627	918	6.850746

2014	519	100	0.192678	931	1.793834
2015	232	100	0.431034	995	4.288793

APPENDIX II: Summarized Regression Results

Multiple R	0.85539	D.W statistic	2.29393
R Square	0.73170	Akaike info criterion	7.52531
Adjusted R Square	0.69469	Schwarz criterion	7.77074
Standard Error	3.39210	Log likelihood	85.30379
Mean dependent var	14.21177	Observations	63.00000
F statistic	227.35490		

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	4	865974.2	216493.5	227.3549	0.008529
Residual	29	2759104	9514.152		
Total	33	3625078			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-1.43429	1.859344	-0.77140	0.039287	-5.23708	2.368492
EPS	0.10752	0.003863	0.45298	0.019046	-0.00615	0.009650
DPS	0.25013	0.009505	0.53605	0.690758	0.02454	0.014345
DPO	0.68426	0.078855	8.67582	0.010020	0.52299	0.845542
P/E	0.31081	0.026461	1.20229	0.015232	0.02231	0.085930

Source: Author's computations (2016).