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FIRM-SPECIFIC CHARACTERISTICS AND FINANCIAL PERFORMANCE OF LISTED AGRICULTURAL COMPANIES IN NIGERIA

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Abstract

The contribution of listed agricultural firms to market development and economic growth has been consistently low in recent years. This could be traced partly to low profitability of agricultural firms in the country which is a function of several firm-specific factors. The study therefore examined the firm-specific factors that influence financial performance of listed agricultural firms in Nigeria. Data were collected from annual reports of the five (5) listed firms in the sector for eleven years from 2010 to 2020. The data were analysed with static panel data regression approach. The results indicate that asset maturity, dividend payout and liquidity have positive and significant effects on return on asset while firm size has significantly negative effect on the return on asset of the firms at 5% level of significance. The study concluded that the listed agricultural firms utilised their assets and manage their liquidity efficiently. There is however, some scale inefficiencies in the firms because, the finding of negative relationship between firm size and return on asset indicates that larger the companies become the lower the financial performance. It is therefore recommended that the managements of agricultural companies in Nigeria should ensure that the firms are not overcapitalised in terms of investment in assets in order to boost both the scale efficiency and profitability of the firms.

Keywords: Asset maturity, Agricultural firms, Firm-specific, Financial Performance, Nigeria

1. Introduction

The role of agriculture in economic growth and development has made it imperative for firms in the sector to improve their performance. This is because agricultural firms are the source of food and raw materials for domestic and industrial needs of the country. The sector and the agro-allied firms also provide employment opportunities to a considerable proportion of the population. On the international scene, agriculture contributes to foreign exchange earnings as well as reducing the balance of payment deficit. Thus, agricultural firms like all other business firms need to sustain their productivity for higher economic growth (Kazeem, 2015). The improvement in performance is expected in increased output of the agricultural produce as well as financial performance of agricultural firms (Izuckukwu, 2011).

The financial performance in this sense has to do with the profitability of the firms that engage in agro-allied businesses. The firms' profitability determines the sustainability of agricultural sector. The profitability of agricultural firms could however be affected by several firm-specific factors and market related factors (Tripathi & Seth, 2014). Factors like firm size, firm age, market value, earnings, dividend payout ratio, and liquidity have been identified as some of the firm specific characteristics affecting profitability of business firms including those in agricultural sector (Anderson, 2016). According to Stainer (2006), firm-specific

factors include all sorts of reported financial information, signalling the financial performance of the companies to stakeholders. It becomes noticeable from the foregoing that the contribution of agricultural sector depends largely on performance of the firms within the sector particularly the profitability of the firms. That is, low contribution of agriculture to economic growth, could be traced to low profitability of agricultural firms and vice-versa. A typical example could be made of Nigerian economy.

In Nigeria, the contribution of listed agricultural firms to market development has been fluctuating in recent pasts. In fact, listed agricultural firms are ranked far below the likes of financial service, industrial goods, consumer goods, information communication and technology (ICT), and oil and gas sectors (Nigerian Stock Exchange [NSE], 2020). In terms of market capitalization of listed firms, agricultural sector firms recorded a total market capitalisation of ₦54.85 billion representing about 36% of total market capitalisation in 2014. The percentage contribution of listed agricultural firms to total market capitalisation fell to 8.8% in 2016 even though the total market capitalisation of the sector had risen to ₦81.71 from ₦54.85 billion in 2014. Also, in the year 2020, the contribution of the sector to the total market capitalisation stood at ₦171.88 billion which stood at 8.18% to the total market capitalisation (NSE, 2020). The trend analysis shows that the performance of agricultural sector, in terms of market capitalisation, is quite low. Since market performance (market capitalisation) has been linked to firms' profitability, the poor performance of listed agricultural firms can be linked to firm-specific characteristics that affect their profitability (Dioha, et al. 2018; Jave, 2013; Kazeem, 2015; Mirza & Mwebia, 2017).

Past studies on firm-specific factors and their effects on firm performance in Nigeria focused on consumer goods sector, insurance firms, deposit money banks, and industrial goods sectors with little or nothing on agricultural sector (Abubakar et al., 2018; Kazeem, 2015). More so, past studies have failed to include assets maturity structure in their study. The factor is so important that it reveals the efficiency in the utilization of firm assets. Exclusion of such a variable in the past studies casted some doubt on the fitness of the models as well as the reliability of the findings. Asset maturity was therefore included in this study for a more reliable result since it has been established theoretically that it could have some effects on performance. It is in this regard that the study was conducted to examine the effect of firm specific characteristics on financial performance of listed agricultural companies in Nigeria.

2. Literature Review and Theoretical Review

Firm-specific characteristics are internal factors that have been conceptually and theoretically established in literature. According to Abdullahi (2016), firm-specific characteristics are firms' demographic, managerial and other internal environmental variables that are capable of influencing the firms' performance. They are behavioural patterns through which organisational goals are achieved (Abubakar et al., 2018). Some of these factors are discussed in this section.

Firm size is a measure of how big or small a firm is which is usually indicated by the value of the firm's total asset. According to Flamini et al. (2015), larger companies tend to perform better as they will be better placed in the market due to scale economy. Brown and Caylor (2004) viewed firm size as the market value of firm's asset. Size is therefore an internal factor that explains profitability of firms (Isik et al., 2017).

Asset maturity means the duration of cash flow which may be short or long for a firm. Asset maturity represents time duration during which a firm's expected cash inflow from its assets is received. It therefore indicates how efficiently a firm's asset is being utilised to generate

cash flow and as such it is capable of having some effect on profitability of business firms. Asset maturity could be measured as book value of non-current asset as a percentage of annual depreciation (Ozkan, 2002). In terms of maturity period, it may be classified as short term or long term. Barclay et al. (2003) stated that short term asset maturity is the weighted average of current assets to cost of sales, while the long term maturity is measured as the ratio of non-current assets (PPE) to the sum of depreciation and amortization expenses (Barclay et al., 2003).

Liquidity is available financial resources that a company uses for its daily operations. It may include all short-term financial assets that are readily convertible to cash at short notice (Lamberg & Valming, 2009). Liquidity assesses the ability of a firm in meeting its financial obligations as and when due (Okwoli & Kpelai, 2006). It also represents the available financial resources for business operation after settling the current obligations of the firm (International Financial Reporting Standards [IFRS], 2006). Summarily, liquidity means the firm's ability to settle its short term financial obligations on a timely manner.

Firm leverage is the extent to which a firm finances its financial requirements with long term debt (Emekewue, 2008). It is the amount of debt capital that a company has in its capital structure (Salehi & Biglar, 2009). Leverage may also be defined as the ratio that is used to explain the relationship which exists between the net asset and external source of financing for the company. (Abbadi & Abbadi, 2013). Financial leverage of a firm may be measured with ratios like debt to equity ratio, debt to asset, liabilities to assets and so on. Most researchers however preferred debt-equity ratio for measuring financial leverage of a firm (Sayedy & Ghazali, 2017).

Al-Shawawreh (2014) defined dividend payout measures return shareholders that obtained on their investments. Some shareholders prefer that the earnings should be distributed as dividends. This may impede future growth of the company as opportunity for investing in profitable projects will be lost. On the other hands, payment of dividends to shareholders tends to affect market price of the firm's shares in accordance with signaling theory. The division between retention and dividends should be such that it draws new buyers and bids up the share price to the highest degree possible, and such a scheme should be designed with the company firm's acquisition options, current financial situation, and investor expectations in mind (Srinivasan & Murugan, 2011).

This has to do with experience that the firm has gathered since its inception of business operation. The experience depends on the length of time of operation which is expected to affect efficiency and financial performance of the firm. That is the longer the period of operation in years, the higher the operating efficiency which have been acquired through the years of operation. This is the reason why newly established firms are not usually profitable their first years of operation (Athanasoglou et al., 2006). Similarly, Yuqi (2007) asserted that that older firms are generally more profitable because of the operating efficiency which they have accumulated through the years of operation.

Based on the reviewed literature, the study anticipates positive or negative relationship of firm size, leverage, liquidity, dividend payout on financial performance as hypothesized by different researcher (Dogan, 2013; Goddard et al., 2005; Islam, et al., 2011; Moses, 2018). On asset maturity, the study expects that the variable will have some correlation with financial performance.

This study is hinged upon the signalling theory postulated by Spence (1973). The signalling theory reflects on the transmission of positive information to outsiders in order to communicate positive corporate qualities. According to Spence (1973) the information signal that is being sent to various stakeholders about the company's performance is the main factor that differentiates the performing from non-performing company. The information communicated about firm performance and some influencing factors signal the firm's operating activities in a year to existing shareholders and potential investors.

According to this theory, any accounting related information about the company that indicates a positive trend in its performance, such as high dividend payout, increase in size, and high growth rate are expected to have positive effects on financial performance while negative effects would be expected from negative reactions such as low liquidity, on firm financial performance of the firm. The theory is therefore relevant in explaining the influence of firm-specific characteristics on the financial performance of listed agricultural firms in Nigeria. It is based on the signalling theory that this study examined firm-specific variables in relation to financial performance of listed agricultural firms in Nigeria.

2. Empirical Review

In recent years, firm specific characteristics and their effects on performance have been empirically analysed by different researchers. Pathirawasam and Adriana (2013) studied firm specific factors and performance of 974 firms in Czech Republic over a four years period (2005-2008). Multiple Regression Analysis was conducted and the study found that firm size, sale growth had positive and significant effect on return on asset (ROA). The result however indicated that leverage was negatively related to ROA and the result was statistically significant.

Bhutta and Hasan (2013) found that tangibility and firm growth were positively and significantly correlated with profitability of food companies in Pakistan. Mehari and Aemiro (2013) included more variables like liquidity and age in study of Ethiopian insurance companies. The results of regression analysis revealed that size and leverage are statistically significant and positively related with return on asset. However, growth, age and liquidity had statistically insignificant relationship with ROA. Kaya (2015) investigated the effect on firm-specific factors on profitability of non-life insurance companies in Turkey. Result of panel regression analysis showed that size, age, loss ratio, current ratio and premium growth rate have significant effects on profitability of the selected firms.

Odalo et al. (2016) investigated the effect of size on performance of listed agricultural firms in Kenya. The correlational and regression analyses conducted indicated that company size affects the financial performance of agricultural companies positively and significantly. Positive effect of firm size was also reported by Khan et al. (2017) which investigated the factors affecting financial performance of listed financial firms in Karachi between 2008 and 2012. Result of panel data regression analysis revealed size had significant effect on the financial performance of listed financial firms. Positive and significant effects were also found for leverage, liquidity, risk, and tangibility. Contrarily, Mootian (2020) found significantly negative relationship between liquidity and financial performance of listed firms in Nairobi, Kenya. The effect of leverage was also found to be positive though not significant. An insignificantly positive relationship was also found for firm size.

In banking sector, Muema and Abdul (2021) examined how firm characteristics influenced listed commercial banks' financial performance on the Nairobi Stock Exchange. Results from the statistical analysis indicated a statistically significant correlation between liquidity,

solvency, and asset structure, and financial performance of Kenyan NSE listed commercial banks. The influence exerted by leverage was however found to be insignificant.

In Nigeria, empirical studies have shown that mixed report exists on the effect of firm-specific factors on financial performance particularly the non-financial companies (Eitokpa, 2015; Kazeem, 2015; Ochuko, 2016). In a study of firm performance, Adetunji and Owolabi (2016) found that financial leverage, firm size, and firm growth are major determinants of performance of firms listed on the Nigerian Stock Exchange. Liquidity and age have been found with negative effect on performance of insurance companies (Abubakar & Isah, 2018). Other factors like firm size, growth and leverage had significantly positive effect on financial performance of consumer goods companies (Dioha et al., 2018).

The above empirical review indicated that past studies on firm-specific factors and performance in Nigeria, focused on the consumer goods sector, insurance firms, deposit money banks, and industrial goods sectors with no known research effort focusing agricultural sector. More so, the past studies have failed to include assets maturity structure as an important firm-specific factor in their study. This study therefore contributes to literature by including asset maturity as a firm-specific factor while focusing on agricultural sector in Nigeria.

3. Methodology

This assessed the effect of firm-specific characteristics on financial performance of listed agricultural firms in Nigeria. Five (5) companies listed on the Nigeria Stock Exchange were selected for the study. The companies are Ellah Lakes Plc, FTN Cocoa Processors Plc, Presco Plc, Livestock Feeds Plc, and Okomu Oil Palm Plc. The firms were selected on the ground that their data are readily available and the data were obtained from the annual reports of listed firms. Static panel data regression analysis was used for analysis. Breusch and Pagan Langragian Multiplier (BP-LM) test was used as preliminary test to determine the most appropriate estimation technique; while Hausman test was conducted to select between fixed and random effects estimates for the analysis.

The panel data regression model is specified as follows:

$$ROA = f(FSIZE, ASSMAT, DIVP, LIQ, FGROW, LEV, FAGE) \dots\dots\dots(1)$$

Econometrically expressed as:

$$ROA_{it} = \beta_0 + \beta_1 FSIZE_{it} + \beta_2 DIVP_{it} + \beta_3 ASSMAT_{it} + \beta_4 LIQ_{it} + \beta_5 FGROW_{it} + \beta_6 LEV_{it} + \beta_7 FAGE_{it} + \mu_{it} \dots\dots\dots(2)$$

The variables of interest were measured as shown in table 1 below.

Table 1: Measurement of Variables

S/N	Variables	Symbol	Proxy	Backup literature
1	Return on assets	ROA	It is measured as the profit before interest and tax divided by total assets	Kazeem (2015); Yana (2010).
2	Firm Size	FSIZE	The natural log of total assets	Batool & Sahi (2019)

3	Dividend Payout ratio	DIVP	Earnings per share divided by dividend per share.	Olowe & Agu (2012)
4	Asset Maturity	ASSMAT	Book value weighted average of the maturities	Alcock, Finn & Tan (2012)
5	Firm Liquidity	LIQ	Current assets divided by current liabilities.	Mira & Javed (2013); Mohammed (2017)
6	Firm Growth	FGRWTH	Change in total sales	Mohammed (2017)
7	Firm Leverage	LEV	Total debt to total assets ratio	Abebe (2019); Mira & Javed (2013)
8	Firm Age	FAGE	The number of years in operation	Yana (2010)

Source: Authors Compilation (2022)

4. Findings and Discussions

Correlation analysis, unit root test and regression results are presented and analysed in this section.

Table 2: Correlation Matrix

Variable	(1) ROA	(2) ASSMAT	(3) FSIZE	(4) LEV	(5) FGROWTH	(6) DIVP	(7) LIQ	(8) FAGE
ROA	1.00							
ASSMAT	0.08 (0.000)	1.00						
FSIZE	-0.17 (0.250)	-0.26 (0.070)	1.00					
LEV	-0.31 (0.030)	-0.13 (0.370)	-0.08 (0.580)	1.00				
FGROWTH	-0.14 (0.320)	-0.17 (0.240)	0.24 (0.090)	0.12 (0.420)	1.00			
DIVP	0.53 (0.000)	0.44 (0.000)	0.05 (0.750)	-0.38 (0.010)	-0.17 (0.240)	1.00		
LIQ	0.44 (0.000)	0.32 (0.030)	0.06 (0.670)	-0.24 (0.090)	-0.26 (0.070)	0.42 (0.000)	1.00	
FAGE	0.15 (0.300)	0.16 (0.280)	0.05 (0.750)	0.00 (1.00)	0.12 (0.390)	0.20 (0.170)	0.30 (0.030)	1.00

Source: Author's Computation, 2022

The correlation coefficients examined in Table 2 above, are all below 0.8 meaning that the issue of multicollinearity does not arise in accordance with Gujarati (2004). It can therefore be said that employing this set of variables in the regression models as used in this study will not result in cause any multicollinearity problem.

Table 3: Results of Unit Root Test

Breitung	Fisher-ADF	Fisher-PP
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Variable	Statistic	p-value	Statistic	p-value	Statistic	p-value
ROA	-2.90	0.001	4.72	0.000	6.85	0.000
ASSMAT	-2.21	0.013	2.91	0.001	4.09	0.000
FSIZE	-2.59	0.005	4.68	0.000	3.71	0.000
LEV	-2.84	0.002	3.64	0.000	1.39	0.082
FGROWTH	-2.46	0.006	5.25	0.000	3.19	0.000
DIVP	-2.89	0.001	4.59	0.000	4.69	0.000
LIQ	-2.90	0.001	9.99	0.000	13.67	0.000
FAGE	-3.58	0.001	15.30	0.000	2.39	0.034

Source: Author's Computation, 2022.

The results of unit root presented in Table 3 shows that the variables are stationary, it can be concluded therefore that the set of variables employed in this study are stationary variables. Consequently, methods such as the pooled OLS, fixed effects and random effects methods can be safely employed with the problem of having spurious regression result. With the conclusion from the unit root tests, the regression analysis was carried out to examine the impact of firm-specific variables on financial performance of listed agricultural firms.

Table 4: Panel Regression Results for Return on Assets

Variable	OLS			Fixed Effect			Random Effect		
	Coeff.	T	P-value	Coeff.	T	P-value	coeff	z	P-value
ASSMAT	4.43	2.19	0.009	1.53	3.33	0.002	0.95	2.00	0.012
FSIZE	-1.46	-1.98	0.054	-3.81	-3.21	0.003	-1.46	-1.98	0.047
LEV	-0.03	-1.04	0.305	-0.02	-0.57	0.571	-0.03	-1.04	0.298
FGROWTH	0.01	0.59	0.560	0.01	1.39	0.172	0.01	0.59	0.557
DIVP	3.32	3.22	0.003	-0.25	0.22	0.830	3.32	3.22	0.001
LIQ	3.93	1.86	0.071	1.91	0.95	0.350	3.93	1.86	0.063
FAGE	-0.22	-0.54	0.595	-0.26	-0.86	0.388	0.22	0.54	0.592
Constant	52.41	1.1	0.277	99.85	2.77	0.009	52.41	1.1	0.270
R-squared	0.463			0.414			0.743		
F-stat.	3.83		0.001	2.84		0.012			
Wald Chi-sq.							34.51		0.000
F-test of Homogeneity				9.96		0.000			
Hausman				5.11		0.387			
Autocorrelation test				2.18		0.213			
Average VIF				2.21					

From the panel regression results presented in Table 4 for return on assets, it is best to first examine the regression diagnostics in order to discuss the specification tests and give detail interpretation of the selected method that is most appropriate for the phenomenon at hand. First, the F-test of homogeneity shows a statistic value of 9.96 and p-value of 0.000. With the test's null hypothesis being that there is no heterogeneity among panel members, the significant test statistic suggests rejection of such hypothesis in favour of the alternative that panel members are heterogeneous. Hence, heterogeneous panel methods such as the fixed and random effects methods are preferred. Also, the result of Hausman test shows a statistic value of 5.11 and p-value of 0.387 which is not statistically significant. Therefore, the most appropriate result is that of the random effects method. The R-squared presented for the random effects method shows a value of 0.743, which indicates that about 74.3% of variations in return on assets is explained by the regression model. The Wald Chi-squared statistic value of 34.51 and its respective p-value of 0.000 suggest that the statistic is significant and hence, the overall model is statistically significant and in good fit. Wooldridge test of autocorrelation has a statistic value of 2.18 and p-value of 0.213 indicating that the result is free from autocorrelation problems.

As to the performance of firm-specific factors, the random effects model result shows asset maturity (ASSMAT) is positively correlated with return on asset. The relationship is found to be statistically significant with p-value of 0.012. This means that 1% increase in asset maturity ratio will bring about 0.95% rise in return on asset of the firms. Also, the firm size (FSIZE) has a statistically significant negative coefficient (of -1.46 and p-value of 0.047) while both dividend payout ratio and liquidity have statistically significant positive coefficients (of 3.32 and 3.93 and p-values of 0.001 and 0.063). This indicates that firm size is significant at 5% significance level, dividend payout ratio is significant at 1% significance level and liquidity is significant at 10% significance level. This is evident from their p-values being less than 0.05, 0.01 and 0.1 respectively. Other variables such as leverage and firm growth do not have statistically significant coefficients in the regression result.

The findings of this study revealed that asset maturity has positive and significant effect on return on asset of the firm. It implies that the firms' assets are efficiently utilised to generate more profit for the business. Conversely, firm size has a negative impact on financial performance of listed agricultural firms in Nigeria. The result is contrary to the findings of Batool & Sahi (2019); Dioha et al (2018), who found that increase in firm size led to increase in financial performance of firms.

It was also found in this study that dividend payout ratio has positive impact on financial performance of listed agricultural firm in Nigeria. This finding is in line with the a priori expectation, as it was expected that dividend payout ratio will have positive impact on financial performance of listed agricultural firms in Nigeria. The result is also strongly corroborated by the finding of Abubakar and Isah, (2018), whose empirical investigation revealed that increase in dividend payout ratio led to increase in financial performance of firms. This finding is well justified as increase in the dividend payout to shareholders provides a signal to investors that the firm is doing well and also serve as reasonable attraction for investors to bring in the investable funds.

The liquidity position of the selected firms was found to have had positive impact on financial performance of listed agricultural firm in Nigeria. This finding conforms to the a priori expectation, as it was expected that liquidity will have positive impact on financial

performance of listed agricultural firms in Nigeria. The result is also strongly corroborated by the findings of Mira and Javed (2013); and Ochuko (2016), whose empirical investigation revealed that increase in liquidity led to increase in financial performance of firms. Since the firm's liquidity is its ability to meet short-term claims and obligations as and when they become due, it will make the firm to carry out its day-to-day activities effectively and hence have positive influence on financial performance.

5. Conclusion and Recommendation

The findings of this study revealed that some firm-specific characteristics like of asset maturity, size, dividend payout, and liquidity have significant effect on financial performance of listed agricultural firms in Nigeria. It was therefore concluded that the listed agricultural firms utilised their assets and manage their liquidity efficiently. There is however, some scale inefficiencies in the firms because, the finding of negative relationship between firm size and return on asset indicates that larger the companies becomes the lower the financial performance. It is therefore recommended that the managements of agricultural companies in Nigeria should ensure that the firms are not overcapitalised in terms of investment in assets in order to boost both the scale efficiency and profitability of the firms.

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