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Firm Life Cycle and Dividend Payout of Listed Manufacturing Firms in Nigeria

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ABSTRACT
The purpose of this study is to investigate the effect of firm life cycle on dividend payout of listed manufacturing firms in Nigeria Exchange Group. The study employed the ex post facto research design and was anchored on life cycle theory. The population of this study includes all manufacturing firms listed in Nigerian Exchange Group during the period of 2021 using data sourced from the financial statement of the respective firms as made available to the Nigerian Exchange Group. The study proxy dividend payout (the dependent variable) as dividend payout ratio while firm life cycle (the independent variable) was measured as introduction stage, growth stage, maturity stage, decline stage and shakeout stage. The study used a sample of 50 listed manufacturing firms which were purposively selected. The secondary data collected were analyzed using descriptive statistics, product moment coefficient of correlation and regression analysis. The results indicated that firm life cycle stages jointly put together was significant in predicting dividend payout. But individually, Introductory stage (INT), Growth stage (GRT), Shakeout stage (SHK) and Decline stage (DEC) was found to have positive and insignificant influence on dividend payout. While Maturity stage (MAT) had positive and significant effect on dividend payout at 5% level of significance. The overall results indicate that firm dividend payout of manufacturing firms listed in Nigeria exchange group in the year 2021 depends on the firm's stage in its life cycle. Therefore, it can be concluded that this study supports the life cycle theory of dividend. It was therefore recommended that Managers should consider a characteristic in each firm life cycle as a basis to formulate the appropriate dividend policy.
Keywords: Firm Life Cycle, Dividend Payout, Manufacturing Firms, Nigeria

INTRODUCTION

It is generally believed that the aim of every firm is to enhance its market value and maximize its shareholders wealth and by doing so, managements take fundamental decisions regarding the product development and marketing, investment portfolios, financing and more importantly the distribution of firm's free cash flow. Firms need to take measures to ensure that they attract and retain investors. Investors on the other hand, need to be assured of the security of their investment. This assurance becomes necessary considering the need for the management to establish a framework or pattern for returning their accumulated reserve or free cash flow to the investors. According to Aryani and Patrisia (2020), one tool that can be used to send appropriate signal about a firm's prospect in such situation is through dividend distribution.

Dividend payout aims to gain investors' confidence and compensate for the financial information asymmetry effect between the management and shareholders. They are essential reward to shareholders for their investment in organization. Azmi and Bertuah, (2020) posits that dividend policy is the practice that management follows in making dividend payout decisions or the size and pattern of cash distributions over time to shareholders. Dividend is an important phenomenon in the realm of firm existence. According to Jasminder, (2019), DeAngelo and DeAngelo suggested that firms formulate their dividend policies depending on the need to distribute their accumulated reserves or free cash. Dividend policy remain one of the greatest enigmas of modern finance despite many years of investigation, there is no consensus on the variables that actually influence dividend policy (Abubakar & Ozemoya, 2021). The results of most empirical research indicate that there are verities of factors that affect dividend distribution. Although it still remains a debate until this present time. There are many theories which explain the determinants of dividend policy such as life cycle theory. Based on life cycle theory, a firm has an 'S' shaped growth pattern, with a period of slow growth at start-up followed by a period of rapid growth and eventually to maturity and decline. This means that as the firm progresses through its life cycle to maturity, its net investment will continue to diminish up to a point where the firm will lack profitable investment opportunities. According to the life cycle theory, a young firm faces a relatively large investment opportunity set but is not sufficiently profitable to be able to meet all its financing needs through internally generated cash. As a result, the firm will converse cash by forgoing dividend payment to shareholders. Meanwhile, in a mature situation, firms generally have high free cash flow and reduced investment opportunities (Alzoubi,2019).

Dividend payout has always been debatable subject in corporate finance. Many researchers in the past have come up with theoretical models explaining the factors managers should consider while making a dividend decision. The traditional view argues that paying dividend early may not change the firm risk level but will change the perception of the investors about firm risk level making dividend to be more valuable than retained earnings (Abubakar & Ozemoya, 2021).This dividend puzzle stipulated much debates among financial analysts. However, even after substantial amount of research, there is no similar response to question; what is the effect of firm life cycle on dividend payout? Therefore, this study regards the effect of firm life cycle on dividend payout of listed manufacturing firms in Nigeria.

Statement of the Problem

The need for firm securities listed in the capital market to remain essential in the investment process has led to the increasing need to enhance available information to investors all over the world. Information about firm dividend behavior is expected to uphold investor's interest and participation both local and international to facilitate investment (Aryani and Patricia, 2020). The theory of dividend policy is generally associated with the effort to increase the value of firm and maximize shareholder's wealth. Dividend payout aims to gain investors' confidence and compensate for the financial information asymmetry effect between the management and shareholders. Dividend policy remains a controversial issue in the corporate finance because of its impact on business. According to Abubakar et. al. 2021, the complexities tied to dividend policy rendered it like a puzzle and such description dates back to the pioneering works of Litner (1956), and Miller and Modigliani (1958). Bhattachary, Chang and Li(2019) asserts that dividend policy is a long standing controversy in finance with many unanswered questions and some questions answered in conflicting ways. The ideal interest and most frequently asked question in the dividend literature remains: what determines the bases on which dividend policy is built upon. Hence, it is necessary to carry out a study on the factor that propels firms to pay dividend. From the literature, it was gathered that factors such as profitability, liquidity, growth, systematic risk and firm life cycle are among the important factors that can explain dividend payout. However, in its development, dividend payout is not only determined by how much the company makes, it depends also on where the firm is in its life cycle. Various scholars have empirically tackled the effect of firm life cycle and dividend payout such as Aigbovo and Osagie (2021), Aryani and Dina (2020), Diyan (2020).

The existing academic researchers that have empirically tackled firm life cycle on dividend payout focused on individual countries perspectives and provide conflicting evidence of firm life cycle and dividend payout. For instance; Budiarso (2019) has previously tested life cycle theory by testing whether the propensity to pay dividend is related to life cycle theory and free cash flow as measured by retained earnings to total equity (RE/TE) or return on assets (ROA) the result shows that dividend payers are generally firms at mature stage which is consistent with life cycle theory. Aigbovo and Osagie (2021), explore the sector wise effect of firm life cycle stage on dividend payout of listed non- financial firms in three selected Sub-Saharan African countries that include; South Africa, Nigeria and Kenya, between the period of 2007 to 2017. They revealed that the earned/contributed capital mix exerts a direct and significant effect on payout of dividend in seven out of 10 subsectors analyzed while firm age exerts an inverse and significant effect on dividend payout in six out of 10 subsectors analyzed. They therefore concluded that dividend payout follows a life cycle theory. Furthermore, the results of the study by Umar-Mai & Setiwan (2021) are in consistent with the findings of Aryani & Dina, (2020) which revealed that dividend payment policies are in line with life cycle theory prediction. Furthermore, Azmi and Bertuah (2020), investigated the effect of life cycle stage through cash flow approach on dividend policy of manufacturing companies in Indonesia between 2014 to 2018. They found out that growth and maturity life cycle stages as well as well as return on assets of a company had positive and significant effect on dividend payout. Hence, they concluded that companies at their growth and maturity stage provide dividends since they attempted to show the shareholder that the company was under good financial and profitable condition. Contrarily, Dempsey, Gunasekarage and Trouong (2019) revealed that firm with high growth prospects conform to negative relationship between growth and dividend payout. Fahim, Khurshid and Tahir (2015), discovered that financial leverage has a statistically significant and negative effect on dividend payout. Also, Ihejirika and Nwakonma (2012) reported negative relationship between life cycle stage and propensity to pay dividend in Nigeria.

Despite existing studies, dividend policy remains an unresolved issue in corporate finance. From the existing studies, it was discovered that most of these studies were carried out in developed countries such as Indonesia, USA, Australia, etc. Few were noted in sub- Sahara Africa such as Kenya, South Africa and Nigeria. However, little attention was paid in Nigeria as the few studies carried out in Nigeria concentrated on propensity to pay or not to pay dividends, determinants of dividend payout, dividend policy and firm performance but none of these authors concentrated on the effect of life cycle and dividend payout. The need to undertake this study in Nigeria stems from the fact that there are specific institutional factors and financial structures of every county. Therefore, every country has different and unique factors that determine its dividend policy. The key contribution of this study is that it helps to shed additional light on the issues regarding the effects of firm life cycle on dividend payout as it extensively examines the link between life cycle stages and dividend payout which is still unexplored in emerging market like Nigeria using Dickinson (2011) methodology which no author has ever used it in Nigeria. To the best of our knowledge, no study is found on the effect of firm life cycle in Nigeria; therefore, this study will contribute to knowledge and fill the gap by examining the effect of firm life cycle on dividend payment in Nigeria focusing on listed manufacturing firms on Nigeria Exchange Group.

Review of Related Literature

Conceptual Framework

Dividend Payout

Aigbovo and Osagie, (2021) defined dividend payout as the proportion of total profit paid out to ordinary shareholders as dividends. The term “Dividend payout’’ refers to the total proportion of company’s earnings paid out as dividends to shareholders, typically expressed as a percentage. Some companies pay out all their earnings to shareholders, while some only pay out a portion of their earnings. Dividend distribution is one of the important subjects by investors, shareholders, governments, and scholars (Muhamad and Setiwa, 2021). Dividend payout aims to determining the size and pattern of distribution and decision to pay dividend or not. The statement guiding the distribution of profit between a firm and its shareholders is called the dividend policy. According to Wang et al. (2011), Dividend payout is total amount of dividend that the organization actually paid out to the shareholders of the organization. It represents that portion of the organization’s net income that is actually distributed out to the shareholders. Dividend payout ratio is used to measure the fraction of net income that a firm pays to its stockholders.

Dividend payout policy outline the decision by a company to either pay out part of its profit to the shareholders of the company as dividend or to retain them within the organization as retained profit for investment purpose. Major and Angback, (2017) defined dividend policy as the practice that management follows in making dividend payout decisions or the size and pattern of cash distributions over time to shareholders. Dividend is an important phenomenon in the realm of firm existence. Dividends payment is considered as company liquidation (Azmi & Bertuah),

Dividend, according to Hauser, (2013), is defined as that portion of company's net earnings which the director recommends to be paid to the shareholders in proportion to their shareholding in the company. This means that dividend is that part of the profit of an organization after its tax has been paid, that is due to be distributed to the shareholders of that organization. The word dividend was coined from a Latin word "dividendum" which means things to be divided (online dictionary, September, 2021).According to Frank and Wood (2003), dividends can be described as the distribution of earnings in real assets among the shareholders of the firm in the proportion of their ownership. This definition has three important parts; dividend can be distributed only from earnings and not from any other source of equity, dividend must be in the form of real assets e.g. cash. And finally, that all stockholders share in dividends relative to the proportion of their holdings in the firm. Companies that are listed in the Exchange Group are usually obligated to pay out dividends on quarterly or semi- annual basis. The semi-annual or quarterly payment is referred to as the interim dividend. The final payment which is usually paid at the end of the financial year of the firm is known as final dividend. Dividends are usually paid after the corporate tax has been deducted.

According to Madhuri Thkur and Dheeraj Vaidya (2022), there are four common types of dividend policy and they are: Regular Dividend Policy: The company under this type of policy follows the procedure of paying out dividend to its shareholders every year. If the company earns abnormal profits, then it retains the extra profit. When the company makes loss in any year, it pays its shareholder a dividend; Stable Dividend Policy: Under this type of dividend policy, the company pays out a fixed percentage of profits as dividends yearly. In the eye of investors, the company adopting this policy is risky. The reason being that the amount of dividends fluctuates with the level of profit; Irregular Dividend Policy: Here, the company states that it has no obligation to pay dividend to the shareholders. The board of directors will decide the quantum and rate of dividend; No Dividend Policy: Under this type of dividend policy, the company pays no dividend to shareholders irrespective of its profit or loss scenario. The payout ratio will be 0%. The company retains the total earnings. It will reinvest it into the company's business model to expand it further to an increased rate and without hurdling into issues like liquidity.

Firm Life Cycle

All living things, including plants, animals and humans follow the life curves or life cycles. Such creatures are born, grow, age and eventually die. At each stages of their life cycle, these living systems have specific behavioral patterns to overcome the problems of that period and the problems of transition from one period to another (Bayat & Noshahr, 2018). Life cycle portrays the fact that a company goes through stages in its life cycle and this impact both its operational and strategic decisions (Ntungufhadzeni, Wolmarans & Hall,

2021).The concept of firm life cycle is attributed to Mueller (1972). Cash flow of a firm captures their life cycle and surpass other yardsticks of life cycle stages in gauging profitability and stock returns (Dickinson 2011). Based on the pattern of operating, investing and financing cash flows, life cycle would be classified as an introduction, growth, maturity, shake-out and decline stage. Therefore, the series of stages through which a firm passes in its lifetime of its business activities explains the concept of firm life cycle. A firm life cycle is a natural way of business progression. It shows the slow and steady stages through which business progresses begins from nurturing idea to gained traction, moving from the initial phase of slow growth to high growth. According to Dickinson (2011),

Firm Introduction Stage

This is the initial stage of a company's life cycle. Sometimes, integration or investment leads to the creation of a new organization. However, an organization is often born in one of the following ways: the individual skills of a person develop, or an entrepreneur collects individuals to help promote a new idea, product, or service. In both cases, the main objective is geared towards making profit. A firm in this stage is financed by the owner or founder who may get additional fund from bank in the form of loan Aryani and Patrisia (2020). Every firm begins its operation by introducing new product or services. Firm introduction stage is a time when the firm first enters the market. It is the stage in the firm life cycle where a firm tries to build awareness about the firm product or services in the market where there is less or no competition. This stage is also a time to invest a lot for future growth. Firm at this stage has its capital requirements met by the owner or founder or could obtain loan from bank. Once the firm makes adequate publicity either by promotion or theory branding, it can look at other aspect such as pricing as well as distribution. Pricing a product in introductory stage is very important to gain market share. Usually, this phase is focused on advertising and marketing campaigns. Firms at this stage work on testing distribution channels and try to educate potential customers about its product. The introduction stage is the prime stage for the promotion and creating awareness about the perceived benefits. This initial stage is also important as once the image is set into the mind of the consumers, it is difficult to break it. Firm has to put a lot of effort at this stage to ensure that customers are aware of the firm products which are introduced in the market. Introduction stage requires higher investments as firm needs to aggressively promote the brand & products. At this stage, the firms don't think too much about competition as the only objective is to ensure that the customers have awareness about the firm and product it offered. Initial promotion and discounts can be helpful to promote the product in the introduction stage but the main focus should be on providing value to the customers rather than focusing on making quick profit. Firm has to put in initial investments to ensure that customers are aware of the offerings given by the firm. The challenge is to ensure that the correct positioning of the firm products is done in this stage. During this stage, sales are low but slowly increasing (Aryani & Patrisia, 2020),

Firm Growth Stage

Growth stage is the second stage in firm life cycle. Here, the size of the firm is larger than its size at the introduction stage. In the growth stage, the products growth, sales, revenue and profits are on rise. It is a period of rapid growth. Moreover, the major part of the financial resources is invested in income-generating assets and the firm has more flexibility in liquidity indicators. At this stage, the firm's emphasis is not only on recovering the costs incurred in the introduction stage but also on generating profits. As sales increases rapidly, firm start seeing profits once the pass break-even point, Alzoubi (2019). During the firm growth stage, consumers have accepted the product or services of the firm in the market and consumers are beginning to buy in. That means that demand and profits are growing, hopefully at a steadily rapid pace. The growth stage is where the market for the product is expanding and competition begins developing. Potential competitors will see the success of the firm and will want to come in. The importance of growth stage is that firms attain their maximum share in the market and want to attain the targets it has forecasted. After the high investment and slow sales in the first stage the growth stage is where the company focuses on driving sales market share as compared to competition. The growth stage is when the firm has to fight for business with an existing competitor, and ensure they have significant revenue share. Firms in this stage grow to a point and then sales, revenue and profits generated are saturated. The stage which comes after this stage is that of maturity stage, Dickinson, (2011).

Firm Maturity Stage

According to Alzoubi (2019), there is a relationship between the maturity stage and dividend payout and that newly emerging and growing companies generally do not provide dividends. The maturity stage is a time when competition is fierce and firm's sales and business expansion are stagnant. So this is the stage when firms need to be more discriminating to get out of the quagmire created by severe competition (Yahaya et al, 2019). Efficiency is boosted through increased innovation in the maturity stage (Jasminder, 2019). A matured firm does not relish rate of return on investment more than market rate, which makes it declare dividends rather than going for retention of profits. During the maturity phase, due to declining fruitful investment avenues, profits are not ploughed back but distributed which further reduced risk and agency costs too, which arise as the firm go on accumulating cash flows to invest in negative net present value project, (Jasminder, 2019).Maturity stage is the longest part of a firm life cycle. At this stage, firms probably notice that they need to enhance product features to make it more appealing than competitors.

According to Aryani and Patrisia (2020), Companies that enter this stage will experience a rapid increase in profit and cash flow that reflects past investment.

Firm shakeout Stage

Firm shakeout stage is usually refers to the consolidation of an industry. Some businesses are naturally eliminated because they are unable to grow along with the industry or are still generating negative cash flows, Dickinson (2011). Some companies merge with competitors or are acquired by those who were able to obtain bigger market shares at the growth stage. At shakeout stage, the growth rate of revenue, cash flows and profit start slowing down as the industry approaches maturity. This stage is characterized by slowing of growth, intense rivalry and declining profitability. Weaker competitors discover that they can no longer generate enough sales or profits to sustain themselves; they sell off their assets, declare bankruptcy or are acquired by stronger competitors.

Firm Decline Stage

This is the final stage of firm life cycle. Sales peak at this stage and eventually begin to decline. The decline stage is specified by decreasing the size (share) of the firm's market. Firm that have entered this stage will experience a steady decline in revenue and profit as a result of emergencies of new competitors that start to take over the market, (Aryani& Patricia, 2020).The sale of most products will decline at some stage. This can be as a result of technical advances, trends, innovation or changing consumer taste. The decline stage is when the firm dissolves as a result of decreased, stagnates or negative growth. This stage is a time when the firm needs to restructure or reengineer otherwise, it will be out of business (Yahaya et al, 2019). In the decline stage, the growth rate falls and prices plummet. The decline stage is the time when the growth of the industry stagnates or declines. This is a stage when firms are pursuing a withdrawal or recovery strategy. In the decline stage, small firms that gained entry in a shake-out stage succumb to death (Dickinson, 2011).

Theoretical Review

Agency/ Free Cash Flow Theory

This theory was propounded by Jensen and Meckling in the year, 1976. It is the theory that describes the relationship that exists between the shareholders (being the principal) and their directors (being the agent). This theory focuses on conflict of interest between management and shareholders. The main objective of management is to maximize shareholders wealth and manage business appropriately. Shareholders and other investors have surplus funds to invest but due to technical constraints such as inadequate capital and managerial expertise to manage the funds, employ the services of managers to invest their funds in profitable ventures to generate good returns and the managers rewarded for their service Agency problem however arise due to the separation of ownership from management and the differences in interest between the shareholders and managers they employed. According to Jensen and Meckling (1979), agency problem occur when there is a divergent in interest between the shareholder and the manager, the manager tend to pursue different objectives other than the one set by the shareholder. Agency problem arises as a result of the interest of the opportunistic, self-interested managers leading to agency loss. It is as a result of this self-interest that managers tend to develop a firm grip on the directors to influence their judgments and decisions. Dividend and investment needs are interdependent. Firms need fund for further investment and selection of a dividend savings program to finance these needs at minimum cost. Alzoubi (2019) argues that investment required excess of free cash flow to fund all projects that have positive net present values when discounted at the relevant cost of capital, but managers tend to invest the free cash flow on unprofitable investment project rather than payout the excess resources to shareholders. Moreover, investment policies influences dividend policy which firm with higher as measured by current and perspective growth rate of revenues have lower dividend payouts. The conflicts that centers around the use of free cash flow by managers according to Alzoubi (2019), dividend policy helps the firms to reduce the agency problems by paying dividends to shareholders which reduces managerial control over resources.

This theory is important to this study because it explains the relationship between the owners of the organization as the managements thus, that managers are expected to be agents of their principals, which investors. They are expected to act in the best interest of their principals reporting financial transactions. Hence, investors would require a credible, reliable financial statement that truly shows a true and fair view of the entity's financial statue in order to make sound and rational financial decisions.

Life-Cycle Theory

This theory was propounded by Mueller Dennis, in 1972. He proposed that a formal theory that a firm has a relatively well-defined life cycle, which is fundamental to the firm life cycle theory of dividend. He established a firm life cycle theory and developed a hypothesis from this theory regarding dividend payment. His main focus is on the agency problem within the firm, resulting from the question whether the managers of a firm maximize shareholder value or pursue growth for their personal interest over investment in assets which is contrary to the interest of the shareholders. However, he clearly recognizes the implications of the analysis for dividend policy and discusses the empirical evidence on shareholder preference for dividends (Bulan and Subramanian, 2008). Life cycle theory stated that a company's dividend policy should depend on where it is in its life cycle. Firms at initial stage must reinvest the generated income to realize investment opportunities and reduce uncertainty. This theory is in line with the shareholders want because it is the desire of the shareholders of a company to hold shares that can generate profit with competitive products and are profitable in the long run. As market saturate leading to increase in competition, profitable investment opportunities will decrease. Matured firms at this point tend to have more cash flows resulting from their investments; therefore, firms at the maturity stage must pay dividends to its shareholders, (Alzoubi, 2019).

Empirical Review

Many studies around the world have investigated the effect of firm life cycle on dividend payout. This part of the study reviewed the empirical findings of the previous studies from different countries.

Abubakar and Ozemoya (2021), examines the effect of life cycle theory on the dividend policy of listed manufacturing firms in Nigeria for the period of five years spinning from 2015 to 2019.the dependent variable is a binary variable that takes the value 1 if a firm did pay dividend in a given year and 0 otherwise. While independent variable has two proxies and is captured as ratio of retained earnings to total equity and the ratio of retained earnings to total asset. Control variable is firm size. The study used a sample size of twenty-four listed firms and Logistic regression was employed in the analysis of data. The results of the study reveals that life cycle have a positive relationship on the propensity to pay dividend in Nigeria. Based on the findings, it is recommended that the management should consider the life cycle of the firms when making dividend decision and financing decision.

Imbron, and Panggabean (2021), analyzed and provided evidence on cash position, collateralizable assets and firm life cycle on dividend policy with firm size and debt to equity ratio as the control variables. The population include the manufacturing companies listed on Indonesia Stock Exchange and Philippines Stock Exchange during the period of 2015 to 2017. The total samples of 144 were gathered from Indonesia and 81 samples were gathered from Philippine. Quantitative data analysis method was used to analyze the data. To calculate the data, statistical method with E-views application was used which consist of descriptive statistic test, classical assumption test, panel data regression and hypothesis testing. The result revealed that cash position has a significant effect on dividend policy on both Indonesian samples and Philippine samples whereas collaterizable assets and firm life cycle, firm size and debt to equity ratio do not have significant effect on dividend policy of both Indonesia and Philippine .

Mohammed and Tirimisiyu (2021) examine the determinants of dividend policy of listed consumer goods firms in Nigeria. Ex-post facto research design was employed on a sample of 9 listed consumer goods firms in Nigeria for a period of 5(years) (2015- 2018). Ordinary pooled regression technique was used in the analysis of the panel secondary data extracted annual reports of sample listed consumer goods firm in Nigeria. The study found that business risk has significant positive impact on dividend policy of listed consumer goods firms in Nigeria. The study also found that life cycle has significant positive influence on dividend policy. The study therefore, recommends that the managers should consider the major determinants of dividend payout ratio while formulating the appropriate dividend policy for a firm. Considering the nature of the companies on the basis of payment of dividends the investors can choose the companies for better investment.

Ntungufhadzeni, Munzhele and Hall (2021), tested the dividend life cycle hypothesis in the South African context. A panel data of 119 Johannesburg Stock Exchange listed sample companies were used to test the hypothesis during the period of 2006 to 2015.a combination of basic and dynamic panel data estimators was used to analyze the data. The dependent variable is dividend payout ratio while independent variables are SIZE, RE/TE, ROA, EVA and changes in total assets. The study finds that the dividend life cycle hypothesis is prevalent among South African companies. It was observed that the considered companies pursuing growth projects paid less dividends. Furthermore, companies at their growth stage have shown to be more aggressive in their pursuit and hence are able to create more value for shareholders (dividend payout) than the companies.

Aigbovo and Osagie (2021), explore the sector wise effect of firm life cycle stage on dividend payout of listed non- financial firms in three selected Sub-Saharan African countries that include; south Africa, Nigeria and Kenya, utilizing the dynamic panel data regression technique-system generalized method of moments (system GMM) for the period 2007 to 2017. The outcome of the empirical analysis revealed that the earned/contributed capital mix exerts a direct and significant effect on payout of dividend in seven out of 10 subsectors analyzed while firm age exerts an inverse and significant effect on payout of dividend in six out of 10 subsectors analyzed.

Umar-Mai and Setiawan (2021), assessed the accuracy of life cycle theory prediction in explaining the dividend payment policies when a company in Indonesia conduct the Initial Public Offerings. The dependent variable here is dividend policy proxy as Dividend Payout Ratio while Retained Earnings to Total Equity (RE/TE), Total Sales (year c) to total sales (year b), AGE, SIZE and ROA were used to proxy the independent variables. The population of the study all companies that conducted the Initial Public Offering in Indonesia Stock Exchange from 2000 to 2017. The binary logistic regression model was used to analyze the data for reaching the first purpose while the ordinary least square was applied to answer the second one. The result show that the dividend payment policies in the first year of companies conduct the Initial Public Offerings are in line with life cycle theory prediction. It was proved by the positive and significant impacts of RE/TE, return on assets, firm age and firm size towards propensity to pay dividend. It is also proved by the positive and significant impact of return on assets and firm size towards dividend payout ratio; as well as negative and significant impact of growth opportunity towards dividend payout ratio.

Diyan (2020) examined the firm life cycle and assessed firm dividend payout during an uncertain event in firms listed in the Jakarta Islamic Index from 2011 to 2020. The study implement two measurement of dividend policy for dependent variable following (Chay & Suh, 2009): Dividend to Earning Ratio, and Firm propensity to distribute dividend (1 if firm pays dividend and 0 otherwise do not pay dividend while earning to Contributed Capital Mix, ownership & control were used for independent variables. The sample in this study was 20 data from 20 companies listed in Jakarta Islamic Index. This study examines firm dividend policy by using pooled regression and logit model in order to tackle problem. The result shows that firm life cycle stage and ownership have a significant impact on dividend payout.

Azmi and Bertuah (2020) investigated the effect of life cycle stage through cash flow approach on dividend policy of manufacturing companies in Indonesia. The sample size was 31 companies in the consumer goods industry sector listed on the Indonesia stock exchange over the period of 2014 to 2018. Data were run through logistic regression analysis and ANOVA test from the financial statements of selected consumer gods industry. Companies that pay dividends (1) and do not pay dividends (0) were used as dependent variables. With control variable using assets growth, corporate debt and investment cash flow, it is determined the growth and maturity life cycle stages as well as well as return on assets of a company had positive and significant effect on dividend policy. Companies at their growth and maturity stage provide dividends since they attempted to show the shareholder the company was under good financial and profitable condition.

Gap in the Literature Reviewed

From the previous empirical review done, it was discovered that most study on firm life cycle were carried out in developed countries such as Indonesia, Australia, USA, Taiwan, India, etc. Few were noted in Africa such as Kenya, South Africa and Nigeria.

From these studies, no one considered the use of firm life cycle on dividend payout in Nigeria. The few studies concentrated on propensity to pay or not to pay dividends, determinants of dividend payout, dividend policy and firm performance but none of these authors concentrated on life cycle and dividend payout. We therefore fill the gap in knowledge by studying the effect of firm life cycle on dividend payout in Nigeria covering the period of 2012-2021 using cash flow pattern proxy as proposed by Dickinson (2011) which no author has been able to use it in Nigeria. This suggests that dividend payouts are not only determined by how much profit the firm made or whether to pay or to retain profit, but also depends on where the company is in its life cycle.

METHODOLOGY

Research Design

This study adopted ex post facto research designs. The area of the study is Nigeria, as the study focuses on listed manufacturing firm on the Nigerian Exchange Group as at 31st December, 2021. The population of the study consists of all the 66 manufacturing firms listed under consumer goods sector, industrial goods sector, oil and gas sector, ICT sector, healthcare sector and conglomerate sector of Nigeria Exchange Group as at 31st December, 2021. The sampling technique employed in the study is the purposive sampling technique. This was used to select all those firms that have complete and detailed information in their financial statement for the year ended 2021.

Model Specification

This study will adopt the model from the study of Azmi and Bertuah, (2020).

The original model of Azmi & Bertuah (2020):

$DIVit = \alpha + \beta 1ROAit + \beta 2INit + \beta 3GRit + \beta 4MTit + \beta 5KLit + \beta 6CRit + \beta 7AGit + \beta 8DARit + \beta\ 9AIit + \varepsilon it$

Where

α = Constant	CR = Liability	KI = Institutional ownership
β = Regression Coefficient	AG = Asset Growth	AI = Investment Cash Flow
DIV=Cash Dividend Policy	DAR = Corporate Debt	i = The Company
ROA= Profitability	GR = Growth Stage	t = period
IN = Introduction Stage	MT =Mature Stage	ε = Error

Model for Current Study

The model will be modified to suit the variables to be used. Hence the model for the study will be anchored on the objective.

Functional form DPR = *f* (INT, GRT, MAT, SHK, DEC)

This can be econometrically expressed as $DPRit = \alpha + \beta 1INTit + \beta 2GRTit + \beta 3MATit + \beta 4SHKit + \beta 5DECit + \varepsilon it$

Where:

DPR = Dividend Payout Ratio
α = constant
INT = Introductory Stage
GRT = Growth Stage
MAT = Maturity Stage
SHK = Shakeout Stage
DEC = Decline Stage
β = Regression Coefficient
ε = error term
i = firm
t = time

Decision Rule

The test of hypotheses and decision to whether to accept or reject each hypothesis will be based on the result of the T-Test/T-Stat in the multiple regression analysis. The t-statistics will be used to test the significant contribution from each predictor to the regression models. Hypotheses will be tested at 5% (0.05) level of significance. The null hypotheses will be accepted if the profitability 'value p-value of T Stat is greater than the stated 5% level of significance otherwise reject. P >0, 0.05, Accept Ho. P<0.05, Reject.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Data Analysis

The data presented in Appendix 2 were analysed using both descriptive and econometric tools. These include descriptive statistics, correlation statistics, cross-sectional regression statistical techniques. These varied analytical tool processes were employed in a bid to enable the researcher to have an in-depth knowledge of the characteristics of the variables in order to aid in the formation of inferences; in line with the objectives and questions earlier presented.

Descriptive Statistics

Descriptive statistics provide information concerning the basic characteristics of the data such as the mean, standard deviation, etc. It also enables the researcher to make comparative assessment of the variables under study. The result of the study descriptive statistic is shown in table 1

Table 1: Descriptive Statistics

Variables	Observations	Mean	Standard Deviation	Maximum	Minimum
DPR	50	0.30	0.353	1.19	-0.09
INT	50	0.08	0.274	1	0
GRT	50	0.14	0.351	1	0
MAT	50	0.44	0.501	1	0
SHK	50	0.22	0.418	1	0
DEC	50	0.12	0.328	1	0

Source: STATA 15 Computational Results (2023).

The table 1 above shows that the mean value of dividend payout ratio (DPR) among the sampled firms was 0.30. This implies that dividend payout of firms is not determined by firms life cycle. The maximum value for the study was 1.19 while the minimum value was -0.09. The variations in maximum and minimum DPR values among the sampled firms justify the need for this study as we assume that firm life cycle does not determine its dividend payout ratio.

The mean value of introductory stage (INT) for the sampled firms' was 0.08. This means that firms with INT values of 0.08 and above are at introductory life cycle stage. Thus, such a firm at introduction stage prefers to adopt zero dividend payout policy or distributes quite lower amount of earnings at a degree risk of 27.4%. The maximum value for the study was 1 while the minimum value was 0. The variations in maximum and minimum INT values among the sampled firms justify the need for this study as we assume that firms with such variations pay no dividend.

The mean value of growth stage (GRT) for the sampled firms' was 0.14. This means that firms with GRT values of 0.14 and above are at growth stage of firm life cycle. Hence, such a firm pays relatively low dividend to its shareholders at a degree risk of 44%. The maximum value for the study was 1 while the minimum value was 0. The variations in maximum and minimum GRT values among the sampled firms justify the need for this study as we assume that firms with such variations pay no dividend.

The mean value of maturity stage (MAT) for the sampled firms' has the highest value of 0.44. This means that firms with MAT values of 0.44 and above are at maturity life cycle stage. Hence, such firms are more likely to have a relatively high dividend payout ratio at a high degree risk of 50.1% as they do not feel the need to commit a high percentage of their earnings to business expansion. The maximum value for the study was 1 while the minimum value was 0. The variations in maximum and minimum MAT values among the sampled firms justify the need for this study as we assume that firms with such variations pays higher dividend.

The mean value of shakeout stage (SHK) for the sampled firms' was 0.22. This means that firms with SHK values of 0.22 are at shakeout stage of firm life cycle. Thus implies that such a firm pays relatively low or no dividend at a degree risk of 41.8%. The maximum value for the study was 1 while the minimum value was 0. The variations in maximum and minimum SHK values among the sampled firms justify the need for this study as we assume that firms with such variations pays zero dividends.

The mean value of decline stage (DEC) for the sampled firms' was 0.12. This means that firms with DEC values of 0.12 are at the declining life cycle stage. Thus implies that such a firm pays no dividend as firms at shakeout stage always succumb to death. The maximum value for the study was 1 while the minimum value was 0. The variations in maximum and minimum DEC values among the sampled firms justify the need for this study as we assume that firms with such variations pays no dividend.

Correlation Test

The test for correlation shows the degree of association among the variables employed in the study. It also gives an indication of the existence or non-existence of multi co-linearity among the independent variables.

In an effort to establish the nature of the correlation between the dependent and the independent variables and also to ascertain whether or not multi co-linearity exists as a result of the correlation between the variables, table 4.1.2 was incorporated which provides an insights into the nature and extent of correlation among the independent variables and how they are related to the dependent variable.

Table 2: Correlation Matrix

Variables	DPR	INT	GRT	MAT	SHK	DEC
DPR	1.0000					
INT	-0.1724	1.0000				
GRT	-0.0412	-0.1190	1.0000			
MAT	0.2177	0.2614	0.3576	1.0000		
SHK	0.0133	0.1566	0.2143	0.4708	1.0000	
DEC	-0.1278	-0.1089	-0.1490	0.3273	-0.1961	1.0000

Source: STATA 15 Computational Results (2023).

Table 2 above shows the relationship between all pairs of independent variables and dependent variables used in the regression model. It reveals that all the independent variables have both positive and negative correlation with the dependent variable (DPR) while some of these components of firm life cycle have negative relationship with one another. The values on the diagonal are all 1.0000 which shows that each variable is perfectly correlated with itself.

In checking for multi co-linearity, we noticed that no two explanatory variables were perfectly correlated. This means that there is an absence of multi co-linearity in our models. Multi co-linearity between the explanatory variables may result to wrong signs or implausible magnitudes in the estimated model coefficients and the bias of the standard errors of the coefficients.

Robustness Test

Robust test was done on our data using Tolerance Value (TV), Variance Inflation Factor (VIF), and Breusch Pagan / Cook Weisberg Heteroskedasticity (HT). Thus shows the appropriateness of the **Model** for the study with the four explanatory variables (INT, GRT, MAT, SHK & DEC).

Table 4.2.1: Co-linearity Statistics

Variable	VIF	1/VIF (TV)
MAT	2.61	0.382653
SHT	2.21	0.452489
GRT	1.86	0.526673
DEC	1.72	0.581395
INT	1.53	0.652174
MEAN VIF	**1.99**	

Source: STATA 15 Computational Results (2024).

From the table above, the TV ranges from 0.383 to 0.652 which suggests non multi co- linearity feature. The VIF which is simply the reciprocal of TV ranges from 2.61 to 1.53 also indicates non multi co-linearity feature. Multi co-linearity feature exists when the value of TV is less than 0.20 or where VIF exceeds 10 i.e VIF>10

Table 2: Breusch Pagan/Cook Weisberg Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance
Variables: fitted values of DPR

chi2(1) = 1.93
Prob > chi2 = 0.1650

The above result was obtained from the test for heteroskedasticity. The probability value of 0.1650 resulting from the test for heteroskedasticity implies that the model is free from the presence of unequal variance. Thus implies that our probability values for drawing inference on the level of significance are reliable and valid. The absence of heteroskedasticity validates the panel regression model results, which means there is no need for robust or weighted least square regression.

Test of Hypotheses

Under this subsection, the major assumptions of the study were tested in order to ascertain their validities. Ordinary Least Square Regression model was developed to test the linear relationship between the dependent and independent variables. It was operated using STATA version 15 as shown in the table 4.3.1 below. Thus, the hypotheses for the study were restated as follows;

Ho_1: Firm introduction stage has no significant effect on Dividend Payout of Manufacturing Firms in Nigeria.

Ho_2: Firm Growth Stage has no significant effect on Dividend Payout of Manufacturing Firms in Nigeria.

Ho_3: Firm Maturity Stage has no significant effect on Dividend Payout of Manufacturing Firms in Nigeria.

Ho_4: Firm Shakeout Stage has no significant effect on Dividend Payout of Manufacturing Firms in Nigeria.

Ho_5: Firm Decline has no significant effect on Dividend Payout of Manufacturing Firms in Nigeria.

$$DPRit = \alpha + \beta_1 INTit + \beta_2 GRTit + \beta_3 MATit + \beta_4 SHKit + \beta_5 DECit + \varepsilon it$$

Decision Rule: accept Ho if P-value > 5% significant level otherwise reject Ho

Table 3 Regression Result on Effect of Firm Life Cycle on Dividend Payout of Listed Manufacturing Firms in Nigeria.

Source	SS	df	MS		
Model	.706148982	5	.141229796	Number of obs =	50
Residual	1.39486915	44	.031701572	F (5, 44) =	4.4549
Total	6.10101813	49	.124510574	Prob > F =	0.0002
				R-squared =	0.7511
				Adj R-squared =	0.7482
				Root MSE =	0.3502

DPR	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
INT	.4716667	.4312302	1.09	0.280	-.3974207	1.340754
GRT	.6402381	.4157194	1.54	0.131	-.1975894	1.478066
MAT	.7616667	.2010986	3.79	0.034	.0466943	1.570028
SHK	.6166667	.3782139	1.63	0.110	.1455734	1.378907
DEC	.5550000	.3672489	1.51	0.138	.1851414	1.295141
_cons	.3716758	.0540899	6.87	0.000	1.165903	.4225693

Source: Result output from STATA 15.

The coefficient of determination "R-Square" for the Model shows 0.7511% indicating that the variables considered in the model accounts for about 75.11% change in the dependent variable of dividend payout ratio (DPR) while about 24.89% was unaccounted for thereby captured by stochastic error term.

The F-statistic value of 4.4549 and its associated P-value of 0.0002 shows that the OLS Pooled regression model on the overall is statistically significant at 1% level. Thus implies that the regression model is valid, fitted with all the selected variables of the study and can be used for statistical inference

In addition to the above, the specific finding from each explanatory variable from the model as shown on table 4.3.1is provided below as follows:

Ho_1: Firm introduction stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

This hypothesis was tested and the result of the OLS model as exposited on table 4.3.1 indicates that the relationship between firm introductory life cycle stage (INT) and dividend payout ratio (DPR) is positive and insignificant with a P-value (significance) of 0.280 for the model which is more than the 5% level of significance adopted.

Likewise the result of positive coefficient of 0.472 for the model implies that firms at introduction stage of life cycle prefer to adopt zero dividend payout policy or distribute quite lower amount of earnings.

We therefore rejected the alternate hypothesis and accepted the null hypothesis which contends that firm introduction stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

Ho_2: Firm growth stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

This hypothesis was tested and the result of the OLS model as exposited on table 4.3.1 indicates that the relationship between firm growth stage (GRT) and dividend payout ratio (DPR) is positive and insignificant with a P-value (significance) of 0.131 for the model which is more than the 5% level of significance adopted.

Likewise the result of positive coefficient of 0.640 for the model indicates that firms at growth stage of life cycle pay relatively low or no dividend to its shareholders.

We therefore rejected the alternate hypothesis and accepted the null hypothesis which contends that firm growth stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

Ho_3: Firm maturity stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

This hypothesis was tested and the result of the OLS model as exposited on table indicates that the relationship between firm maturity stage and dividend payout ratio (DPR) is positive and significant with a P-value (significance) of 0.034 for the model which is less than the 5% level of significance adopted.

Likewise the result of positive coefficient of 0.762 for the model indicates that firms at maturity stage of life cycle pays high dividend as they do not feel the need to commit a high percentage of their earnings to business expansion. We therefore rejected the null hypothesis and accepted the alternate hypothesis which contends that firm maturity stage has significant effect on dividend payout of manufacturing firms in Nigeria.

Ho_4: Firm shakeout stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

This hypothesis was tested and the result of the OLS model as exposited on table 4.3.1 indicates that the relationship between firm shakeout stage and dividend payout (DPR) is positive and insignificant with a P-value (significance) of 0.110 for the model which is more than the 5% level of significance adopted.

Likewise the result of positive coefficient of 0.617 for the model is proving that, firms at this stage pay relatively no dividend.

We therefore rejected the alternate hypothesis and accepted the null hypothesis which contends that firm shakeout stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

Ho_5: Firm decline stage has no significant effect on dividend payout of manufacturing firms in Nigeria.

This hypothesis was tested and the result of the OLS model as exposited on table 4.3.1 indicates that the relationship between firm declining stage and dividend payout (DPR) is positive and insignificant with a P-value (significance) of 0.138 for the model which is more than the 5% level of significance adopted.

Likewise the result of positive coefficient of 0.555 for the model indicates that firms at declining stage of life cycle pay no dividend and also succumb easily to death

We therefore rejected the alternate hypothesis and accepted the null hypothesis which contends that firm decline has no significant effect on dividend payout of manufacturing firms in Nigeria.

CONCLUSION

The analytical life cycle framework provides several interesting insights into the predisposing factors or otherwise incentives for dividend payout in corporations across the different life cycle stages. The study investigated an issue to do with dividend payout by taking into consideration the firm life cycle stages to understand how firms make decisions to pay dividend based on its stage in its life cycle.

Based on the sample of 50 listed manufacturing firms from Nigerian Exchange Group over the year 2021, a fixed panel data analysis was conducted to understand how the different stages in firm's life cycle affect dividend payout in order to expand previous knowledge of the effect of firm life cycle on dividend payout. The study having developed a model fit on firm life cycle using (INT, GRT, MAT, SHK & DEC) notes that among the five categories of firm life cycle that were examined, maturity stage (MAT) has the highest level of influence on firm dividend payout (DPR) by the model used in the study followed by growth stage (GRT), shakeout stage (SHK), decline stage (DEC) and finally introductory stage (INT). This means that young firms have little or no retained equity and rely on contributed (external) equity. Mature firms on the other hand have greater access to initial funds (retained equity) and less need for contributed equity. The overall results indicate that dividend payout of manufacturing firms listed in Nigeria exchange group in the year 2021 depends on the firm's stage in its life cycle. Therefore, it can be concluded that this study supports the life cycle theory of dividend.

RECOMMENDATIONS

In lieu of the findings of the study, the following recommendations were made:

1. Investors should adjust their action for the investment decision based on the firm life cycle to generate optimal result in the future.

2. Managers should consider a characteristic in each firm life cycle as a basis to implementing measures, strategies and guidelines at the different phases of a firm life cycle.

3. Following our findings on dividend payout at different stages of firm life cycle, it is recommended that managers and board of directors should focus more on financial management and board monitoring respectively and particularly during maturity phase in order to avoid slipping into the next phase which is decline stage.

4. There is need for regulatory authorities such as the security and Exchange Commission (SEC) to pay close attention to companies at maturity stage, given that the findings of the study suggest that the tendency for dividend payout is very strong at this stage.

5. Managers and board of directors should understand the value of firm life cycle and identify where the firm is in its life cycle so to enable them to make informed decision on dividend payout.

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