Firms Growth and Cashflow Analysis: An Empirical Analysis of Nigeria Firms

Abstract: This study explores the nexus between firm’s growth and cashflow analysis of Nigeria firms. It utilized an ex post facto research design in investigating the relationship between cashflow analysis and firm growth in consumer goods firms in Nigeria. Data on cash flow, revenue growth, and growth of profit were collected from the financial statements of the firms. Correlation and regression analyses were utilized to analyze the data and testing of the hypothesis. From the results, it was revealed that there is a weak positive correlation between firm growth and net cash flow, and a significant positive nexus between net cash flow and firm growth after controlling for the effect of profit growth. The research study also found a trade-off between net cash flow and profit growth. On the premise of these findings, it was recommended that companies in Nigeria should prioritize maintaining a healthy cash flow to facilitate growth and balance their financial priorities to maximize their growth potential. These findings can help inform business decisions and policies aimed at promoting economic growth in the country.

Key words: Cashflow, Profit Growth, Firms Growth.

1. Introduction

Firms’ growth and cash flow analysis are essential factors for the financial management of companies. The ability of a company to grow and sustain its growth depends on its ability to generate cash flows, which are the lifeblood of any business. In Nigeria, the importance of cash flow analysis and firms' growth cannot be overemphasized, especially given the current economic climate.

In recent years, the Nigerian economy has experienced a series of challenges, including fluctuations in oil prices, foreign exchange rate instability, and security issues. These challenges have had a significant
impact on the business environment, with many companies struggling to maintain their growth and financial stability. The effect of these challenges has also been seen in the reduction of the Nigerian Gross Domestic Product (GDP) from 2.27% in 2019 to -1.92% in 2020, according to the National Bureau of Statistics (NBS) (NBS, 2021).

Firms in Nigeria have struggled with cash flow management due to a variety of reasons, including high inflation rates, high interest rates on loans, and the unpredictability of government policies. The unpredictability of government policies affects the business environment as companies are often caught off guard when policies are changed without notice. These challenges have led to a high mortality rate for firms in Nigeria, with many firms struggling to survive beyond their fifth year of existence (Onyebuchi, 2019).

In light of these challenges, it becomes essential to examine how firms in Nigeria manage their cash flow and growth strategies. Several studies have explored the factors connecting cash flow and firms' growth. For instance, Mian (1996) investigated the resultant effect of cashflow analysis on decisions that involve investments in in the U.S. The study found that cash flow was a crucial determinant of investment decisions. Similarly, Duan et al. (2019) studied the influence of cash flow on the financial performance of Chinese companies. They found that cash flow was positively related to profitability and shareholder value.

In Nigeria, there have been scare studies that have explore the connection amidst cash flow and firms' growth. For instance, Olatunji and Adelopo (2017) examined the connection between cashflow analysis and performance of entities in Nigeria. They found a positive and significant nexus between the variable. Similarly, Adegbie and Adegbie (2018) explored the connection amidst cashflow and growth in Nigeria banking sector. They found a significant positive connection between cashflow and growth.

Despite these studies' findings, there is still a significant knowledge gap in the literature regarding firms' cash flow management and growth strategies in Nigeria. Most of the previous studies have focused on specific sectors or industries, such as banking, leaving out other industries' analysis. Additionally, there is a need to explore how firms manage their cash flows and growth strategies in the context of the current economic challenges in Nigeria.

Therefore, the aim of the study is to fill the gap in knowledge by exploring how firms in Nigeria manage their cash flow and growth strategies across different industries. Specifically, the research study seeks to explore the significance of cash flow on firms' growth and how firms manage their cash flow.

2. Material and Methods

Cash Flow Analysis

Cash flow analysis involves a thorough evaluation of the cash inflows and outflows of a business, which helps to assess its financial well-being. It involves examining a company's various activities to identify major sources and uses of cash during a specific period. According to the “Financial Accounting Standards Board (FASB)”, cash flow analysis is a "financial statement that shows a company's cash inflows and outflows over a given period, categorized as operating, investing, or financing activities."(FASB, 2022)

Cash flow analysis allows businesses to track their cash flows and make informed financial decisions. It helps in identifying various sources and utilization of cash, enabling businesses to plan for future investments and expenses. Cash flow analysis provides critical information about a firm’s capacity to deliver its financial responsibilities, such as paying its suppliers, employees, and lenders. The analysis also helps in assessing a company's liquidity, profitability, and solvency.
Methods of Cash Flow Analysis

There are two main methods of cash flow analysis “the direct method and the indirect method”. The first method (direct) involves examining the actual cash inflows and outflows of a business. It involves tracking receipts and payments of cash for each category of activity, such as “operating, investing, and financing activities”. This also provides a clear snapshot of a firm's cash flows but can be time-consuming and expensive to implement.

The indirect method involves adjustment of the net income for non-cash transactions such as depreciation, amortization, and working capital changes. The indirect method involves taking non-cash expenses and adding them to the net income. Additionally, it requires making adjustments for any changes that may have occurred in the working capital. The indirect method is less accurate than the direct method but is easier and less expensive to implement.

Firms Growth

Firm growth is a critical concept that have receive a significant debate among scholars, policymakers, and practitioners. The growth of firms is an essential element of economic development, as it is associated with job creation, increased productivity, and innovation (Audretsch, 2015). According to the literature, firm growth can be measured in various ways, such as employment growth, sales growth, and profitability growth (Coad et al., 2016).

Firm growth can be defined as an increase in the size of a company's operations over time, as measured by the firm's resources, capabilities, and output (Birley et al., 2014). Growth is a multidimensional phenomenon that can occur in different forms, such as organic growth, in which a firm expands its operations through internal resources, and inorganic growth, which involves mergers, acquisitions, and partnerships (Birley et al., 2014). According to Baumol (2010), the main objective of firms is to achieve sustainable growth over time, as it enables them to generate higher profits, gain a competitive advantage, and enter new markets.

The determinants of firm growth have been the subject of extensive research in the literature. Scholars have identified various factors that influence firm growth, such as industry characteristics, firm size, age, and innovation (Audretsch et al., 2018).

Apart from the determinants of firm growth, various factors influence the ability of firms to achieve growth. One such factor is the presence of financial resources, which is critical for firms to invest in new technologies, expand their operations, and hire new employees (Birley et al., 2014). According to research, firms that have access to other sources of finance income, such as “venture capital”, are more likely to achieve faster growth rates than firms that rely solely on internal financing (Birley et al., 2014). Additionally, regulatory and institutional factors, such as taxation policies, labor laws, and intellectual property rights, can also influence firm growth (Audretsch et al., 2018).

While firm growth is an essential element of economic development, it is not without its challenges. Research has shown that firms face various obstacles in achieving growth, such as resource constraints, market competition, and managerial capacity (Coad et al., 2016). For instance, firms may face difficulties in acquiring the necessary financial and human resources to expand their operations, which can limit their ability to achieve growth (Coad et al., 2016). Similarly, companies might encounter fierce competition from well-established competitors in the market, and this can create challenges in terms of gaining market share and achieving growth (Geroski, 2013).
Theoretical Review

Pecking Order Theory

This theory was introduced by Myers and Majluf in 1984, they suggests that “firms prefer to finance their investments using internal funds first, then debt, and finally equity”. The theory was premised on the ideology that firms face information asymmetry problems, which make external financing more expensive than internal financing. The information asymmetry problem arises because management have more information on the true value of their companies than outside investors. As a result, outside investors may view the decision to raise external financing as a signal that the firm is overvalued, which can lead to a higher cost of capital.

The Pecking Order Theory is widely accepted by both academics and practitioners, and there is a large body of literature that supports its predictions. For example, Frank and Goyal (2009) found that “firms prefer to finance their investments with internal funds first, then debt, and finally equity”. In addition, Shyam-Sunder and Myers (1999) found that companies that spend heavily on other forms of financing have a higher cost of capital than firms that rely on internal financing.

Cash flow management is an important issue for firms, and the Pecking Order Theory has important implications for how firms manage their cash flow. According to the Pecking Order Theory, firms should utilized internal funds first, then debt, and finally equity. This suggests that firms should prioritize investments that can be financed with internal funds, and only use external financing when internal funds are not sufficient.

In practice, this means that firms should prioritize investments that have a high return on investment and a short payback period. These investments are more likely to generate sufficient internal funds to finance future investments, which can help firms avoid the need for external financing. In addition, firms should also prioritize investments that have low risk, as this can reduce the cost of capital and make external financing less expensive.

The theory also suggests that firms should avoid using equity financing unless it is absolutely necessary. This is because equity financing is the most expensive source of financing, as it involves giving up ownership and control of the firm. In addition, equity financing can also send a negative signal to investors, as it suggests that the firm is unable to finance its investments with internal funds or debt. This can lead to a lower stock price and a higher cost of capital.

The theory has important effect for the growth of firms. According to the theory, firms should prioritize investments that can be financed with internal funds, which suggests that firms should focus on organic growth rather than external growth. Organic growth involves expanding the firm's existing operations, which can be financed with internal funds. External growth, on the other hand, involves acquiring other firms or entering new markets, which often requires external financing.

In practice, this means that firms should focus on investments that can generate sufficient internal funds to finance future investments. This can involve investing in new products or services, improving efficiency, or expanding into new markets that are closely related to the firm's existing operations. By focusing on organic growth, firms can avoid the need for external financing, which can reduce the capital cost and improve the financial performance of entities.

Empirical Review and Formulation of Hypothesis

Adewuyi, (2019) examines the implication of financial constraints on growth of Small and Medium-sized Enterprises (SMEs) in Nigeria. He utilizes data from a survey of 452 SMEs in Nigeria and employs logistic regression analysis to investigate the nexus between finance constraints and firm growth. Results indicates that finance constraints significantly affect growth of SMEs in Nigeria. Specifically, he finds
that access to finance, collateral requirements, high interest rates, and inadequate financial management skills are major financial constraints facing SMEs in Nigeria. These constraints limit their ability to expand their businesses, increase employment, and contribute to economic development. The study suggests that policymakers should address the financial constraints facing SMEs by developing policies that promote access to finance, simplify collateral requirements, and lower interest rates. Additionally, efforts should be made to improve financial management skills among SMEs to enhance their ability to manage finances and grow their businesses.

Stephen and Adewole examined “the relationship between working capital management (WCM) and firm growth in Nigeria”. The authors use a sample of 60 companies that is quoted for the period 2010-2015. Their study found a significant positive connection between WCM and growth of companies in Nigeria. Specifically, companies with better management of their working capital tend to grow faster than those with poor WCM practices. The authors also found that larger companies use to have better WCM practices, while smaller firms have more challenges in managing their working capital. Furthermore, the study highlights the importance of effective WCM practices for firms to sustain their growth in the long run. The authors recommend that firms should prioritize improving their WCM practices to enhance their growth prospects.

Ewah and Olowookere (2019) examines cash conversion cycle and firm growth in Nigeria using a sample of selected listed companies. The authors utilize data from selected company’s financial statements over a five-years study period (2011 to 2015), and employ a panel data regression analysis. Their study results show a significant negative connection between cash conversion cycle and firm growth, which implies that companies that have a briefer conversion cycle tend to experience better levels of growth. The authors also find that firm size and leverage have a positive impact on companies’ growth, while liquidity negatively affect companies’ growth. The paper concludes that efficient management of conversion cycle of cash is essential for firms to achieve higher levels of growth. The authors recommend that firms should focus on reducing their cash conversion cycle by improving their inventory management, reducing their receivable collection period, and increasing their payable payment period.

Abubakar and Anas, (2019) examined factors that affect finance performance and growth of Nigerian listed banks. The authors used a panel data analysis covering the period from 2010 to 2015, and their sample included nine banks quoted on stock market. They found that bank size, asset quality, capital adequacy, and liquidity were positively related to financial performance and growth, while operating efficiency was negatively related. In addition, the authors found that economic growth and inflation had a positive impact on the financial performance and growth of the Nigerian listed banks. The authors recommend that policymakers should focus on promoting economic growth and stability to enhance the performance and growth of the banking sector.

Benna and Awwalu (2017) examines the relationship between liquidity management and firm growth using data from Nigerian manufacturing firms. The study finds that firms with effective liquidity management are more likely to experience higher growth rates than firms with poor liquidity management. Additionally, the authors conclude that there is a positive relationship between profitability and firm growth.

Yusuf and Adewumi (2019) examined the relationship between working capital management and firm growth in the agricultural sector in Nigeria. The study collected data from 63 firms in the agricultural sector using a survey questionnaire. The findings of the study show that working capital management affect firm growth in the agricultural sector in Nigeria in a significantly positive way. The study also found that the level of investment in fixed assets has a positive impact on firm growth, but this effect is not as strong as the effect of working capital management. The authors suggest that managers in the
agricultural sector should pay attention to their working capital management practices to enhance their firms’ growth potential.

Aremu and Ijaiya (2014) investigate the connection between cash flow and performance in Nigerian quoted firms. The authors collected data from 70 companies listed on exchange market from 2008 to 2012 and used regression analysis to test the nexus of cash flow and performance. They found a positive significant connection on cash flow and firm performance, which implies that, increase in cash flow leads to improvement performance. The authors also found that cash flow has a greater impact on companies’ performance than other financial variables such as profitability, liquidity, and leverage.

Adeniyi and Oyebisi, (2015) examines the “relationship between financial constraints and firm growth in the Nigerian manufacturing sector”. The use a panel dataset of 87 manufacturing firms in Nigeria over the period of 2000-2011 and employ a dynamic model for panel regression to estimate the impact of financial constraints on firm progress. From their findings, it was suggested that financial constraints have a negative influence on companies’ growth in Nigeria, and that having a source to external finance is a relevant determinant of companies progress. The authors also find that smaller entities are most probable to be finance constrained and that this constraint negatively affects their growth.

Ojo and Ipinnaiye (2014) examines the nexus of working capital management and firm growth among Nigerian listed firms. The authors use data from 54 firms over a period of six years (2005-2010) and analyze the influence working capital management have on company’s progress. They find that efficient working capital management positively affects firm growth, while inefficient working capital management negatively affects firm growth. The study also reveals that the influence working capital management have on firm growth is more significant for small firms than for large firms. The authors suggest that small firms should focus on improving their working capital management practices to achieve sustainable growth.

Ayeni and Adenuga, (2013) examines the nexus of liquidity and growth of firms listed in Nigeria. The authors collected data on 40 firms listed on the “Nigerian Stock Exchange” for the period of 2005 to 2010 and analyzed it by utilizing “descriptive statistics, correlation analysis, and regression analysis”. They found a positive and significant connection between liquidity and firm growth, which implies that companies whose liquidity better, will most probably experience higher growth rates. Additionally, the study found that the impact of liquidity on firm growth is stronger for smaller firms compared to larger firms. The authors conclude that maintaining adequate liquidity is crucial for the growth of Nigerian listed firms, especially for smaller firms that face more constraints in accessing external financing.

The gap in the literature is the lack of research on “the relationship between cash flow and firm growth in Nigeria”. Most of the studies reviewed have focused on other financial variables such as financial constraints, working capital management, and liquidity management. Therefore, the hypothesis that "there is no significant positive relationship between cash flow and firm's growth in Nigeria" is reasonable considering the limited research available on the topic. However, it is worth noting that some of the reviewed studies have found a positive relationship between other financial variables such as working capital management and firm growth, which may indirectly affect the nexus between cashflow and firm growth. Therefore, further research is needed to examine ‘the relationship between cash flow and firm growth in Nigeria” and to better understand the underlying mechanisms that drive this relationship.

Hypothesis

H0₁ There is no significant positive relationship between cash flow and firm’s growth in Nigeria.
Methodology

The study employed “ex post facto research design”, while the study population is listed consumer goods companies in Nigeria. Data on the cash flow and growth of the selected firms were collected. The data were obtained from the financial statements of the firms. Cash flow was measured using the cash flow statement, firm growth was measured using metrics such as revenue growth and profit growth was used as the control variable. Correlation analysis and regression analysis were utilized to analyze the data and test the hypothesis. Correlation analysis was used determine if there is a relationship between cash flow and firm growth, while regression analysis was used to estimate the strength of the relationship.

Model Specification

Firms Growth = β0 + β1(Cash Flow) + β2(Profit Growth) + ε

Where:

Firms Growth: Dependent variable, measured by revenue growth of firms.
Cash Flow: Independent variable, measured by net cash flow of firms.
Profit Growth: Control variable, measured by the growth of profits of firms.

β0: Intercept, represents the expected value of Firms Growth when Cash Flow and Profit Growth are both zero.
β1: Coefficient of Cash Flow, represents the effect of Cash Flow on Firms Growth while controlling for Profit Growth.
β2: Coefficient of Profit Growth, represents the effect of Profit Growth on Firms Growth while controlling for Cash Flow.
ε: Error term, represents the unobserved factors that influence Firms Growth but are not accounted for in the model.

3. Results and Discussion

Correlation Analysis

<table>
<thead>
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<th>Firms Growth</th>
<th>Net Cashflow</th>
<th>Profit Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms Growth</td>
<td>1.00</td>
<td>0.26</td>
<td>0.20</td>
</tr>
<tr>
<td>Net Cashflow</td>
<td>0.26</td>
<td>1.00</td>
<td>-0.25</td>
</tr>
<tr>
<td>Profit Growth</td>
<td>0.20</td>
<td>-0.25</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Based on the correlation analysis results presented above, there appears to be a positive but not a strong correlation between the growth of firms and their net cash flow, with a correlation coefficient of 0.26. This suggests that as firms experience growth, there tends to be a slight increase in their net cash flow, but the relationship is not particularly strong.

Additionally, a negative and weak correlation between net cash flow and profit growth, with a correlation coefficient of -0.25. This suggests that as net cash flow increases, there tends to be a slight decrease in profit growth.

Finally, a positive and weak correlation between firms’ growth and profit growth was found, with a correlation coefficient of 0.20. This suggests that as firms experience growth, there tends to be a slight increase in their profit growth, but again, the relationship is not particularly strong.
Overall, these results suggest that while there may be some relationship between firms' growth and net cash flow in Nigeria, the relationship is not particularly strong. Additionally, there may be some trade-off between net cash flow and profit growth, with an increase in one leading to a slight decrease in the other. However, the relationship between firms' growth and profit growth appears to be positive, which may be a positive sign for firms seeking to expand their operations in Nigeria.

### Regression Analysis

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Estimate</th>
<th>Std. Error</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.803</td>
<td>1.509</td>
<td>-0.532</td>
<td>0.606</td>
</tr>
<tr>
<td>Cash Flow</td>
<td>0.0004</td>
<td>0.0002</td>
<td>2.110</td>
<td>0.048</td>
</tr>
<tr>
<td>Profit Growth</td>
<td>-0.003</td>
<td>0.001</td>
<td>-2.698</td>
<td>0.014</td>
</tr>
</tbody>
</table>

The regression results suggest “that there is a statistically significant relationship between cash flow and firm growth in Nigeria”, after controlling for the effect of profit growth. Specifically, the coefficient estimate for cash flow is 0.0004, which therefore implies that for a unit increase in cash flow, will result to an expected increase of 0.0004 units in firm growth, all else being equal.

The t-value for the cash flow coefficient is 2.110, which indicates that the coefficient is statistically significant at the 5% level of significance (assuming a two-tailed test). The p-value for cash flow is 0.048, which is less than the commonly used threshold of 0.05, providing additional evidence that the cash flow coefficient is statistically significant.

Furthermore, the coefficient estimate for profit growth is negative (-0.003) and statistically significant (t-value = -2.698, p-value = 0.014), indicating that a higher rate of profit growth is associated with lower levels of firm growth, after controlling for the influence of cash flow.

### Conclusion

Based on the correlation and regression analyses, it can be summarized that there is a weak positive correlation between firm growth and net cash flow, and a significant positive connection between cash flow and firm growth after controlling for the effect of profit growth. This suggests that firms in Nigeria may experience some increase in growth as their net cash flow increases, but the relationship is not particularly strong. However, the regression results provide evidence that there is a significant relationship between cash flow and firm growth, implying that cash flow can be a crucial factor in predicting firm growth in Nigeria. The study also found a trade-off between net cash flow and profit growth, with an increase in one leading to a slight decrease in the other. This may suggest that firms need to balance their financial priorities to maximize their growth potential. Overall, the results of this study provide insights into the factors that influence firm growth in Nigeria and can help inform business decisions and policies aimed at promoting economic growth in the country.

### Recommendations

From the results of the study, below are the recommendations made:

i. Firms in Nigeria should prioritize maintaining a healthy cash flow to facilitate growth. The significant relationship between cash flow and firm growth suggests that firms need to carefully manage their cash flow to ensure that they have the resources to expand their operations.

ii. Firms should balance their financial priorities to maximize growth potential. The trade-off between net cash flow and profit growth suggests that firms need to strike a balance between these two priorities to ensure sustainable growth in the long term.
iii. Policymakers should focus on creating an enabling environment that supports firms' growth. The findings of this study can help inform policies aimed at promoting economic growth in Nigeria. Policymakers can prioritize initiatives that improve access to finance and create a supportive business environment to enable firms to thrive.

iv. Further research should be conducted to identify additional factors that influence firm growth in Nigeria. While this study provides valuable insights, there may be other factors that play a role in determining firms' growth trajectories in Nigeria. Additional research can help deepen our understanding of these factors and inform more targeted policies and strategies to support firms' growth in the country.

Reference


