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Firm size as a determinant of cash level among listed healthcare firms in Nigeria

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Abstract

This study examined the effect of firm size on cash levels among listed healthcare firms in Nigeria. This study adopts an ex-post facto research design. The population and sample size were made up of 7 listed healthcare firms and 5 listed healthcare firms, respectively. Secondary data for the study were sourced from firms' annual reports from 2014 to 2023. Descriptive analysis was carried out, while ordinary least square regression was used to test the hypotheses. The findings revealed that firm size has a significant positive effect on cash levels of listed healthcare firms in Nigeria (b = 0.052022; p-value = 0.0260). In conclusion, as firms grow in size, their ability to maintain higher cash balances increases. The study recommends that small healthcare firms should prioritize strategic growth initiatives such as mergers, acquisitions, or market expansion to increase their size and enhance their ability to accumulate and maintain higher cash reserves. This study contributes to knowledge by providing empirical evidence on the relationship between firm size and cash levels in the Nigerian healthcare sector, an area with limited prior research.

Keywords: Firm Size, Cash Levels, Healthcare Firms

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1. Introduction

The financial management of firms plays a critical role in ensuring their sustainability, growth, and ability to compete effectively in the market. One of the essential aspects of financial management is liquidity management, which involves maintaining an optimal cash level to meet short-term obligations and take advantage of investment opportunities. Inadequate cash levels can lead to financial distress, bankruptcy, or missed growth opportunities, while excessive cash holdings may indicate inefficiencies in capital utilization (Ukoha & Udeh, 2024). As businesses strive to balance liquidity and profitability, several factors influence their cash management strategies, one of which is firm size. Larger firms often have different financial characteristics compared to smaller firms, including their ability to generate cash flows, access credit facilities, and implement strategic financial policies. Within the healthcare industry, firms operate in a highly regulated environment, characterized by high capital requirements, research and development (R&D) expenditures, and fluctuations in revenue streams (Ndu, Ifurueze & Amahalu, 2024). Over the years, the Nigerian healthcare sector has faced numerous challenges, including inadequate funding, regulatory hurdles, and fluctuating demand for healthcare products and services (Ogueji, Ogunsola, Abdalla & Helmy, 2024). These challenges necessitate prudent financial management strategies to ensure sustainability and operational efficiency. Cash management in healthcare firms is particularly important due to the sector's capital-intensive nature and the need to maintain liquidity to cater to unforeseen medical emergencies, procurement of medical equipment, and investment in R&D (Ndu, Ifurueze & Amahalu, 2024).

Firm size has been widely recognized as a significant determinant of cash levels within organizations (Noke, Oliver & Udeh, 2024). Larger firms often benefit from economies of scale, improved access to external financing, and better financial risk management capabilities (Nworie, Okafor & John-Akamelu, 2022; Nworie & Okafor, 2023). These firms typically hold lower cash levels relative to their total assets because they have better access to credit markets and can

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raise capital through equity or debt financing. On the other hand, smaller firms may struggle with liquidity constraints due to limited access to financial markets and a higher dependence on internally generated funds (Amahalu & Okudo, 2023). However, Vuković, Mijić, Jakšić, and Saković (2022) argued that larger companies generally hold less cash due to more favorable external financing sources. Be that as it may, smaller firms may need to maintain higher cash reserves as a precautionary measure against unexpected financial shocks (Gao, Grinstein & Wang, 2017). In the healthcare industry, firm size can influence cash holdings in various ways. Large healthcare firms may have established supply chains, diversified revenue sources, and robust financial strategies that allow them to maintain optimal cash levels. Conversely, smaller healthcare firms, particularly startups or those operating in niche markets, may experience cash flow volatility, leading to higher cash retention for precautionary and transactional purposes (Ndu, Ifurueze & Amahalu, 2024). The relationship between firm size and cash level is further complicated by industry-specific factors such as government regulations, insurance reimbursements, and payment cycles from clients, which can impact liquidity management decisions. Furthermore, firm size affects the agency costs associated with holding cash. In large firms, where ownership and control are often separated, managers may hold excessive cash for self-serving reasons, such as empire-building or increasing discretionary spending, which can lead to inefficiencies and reduced shareholder value. This agency problem is more pronounced in large firms because of the difficulty shareholders may face in monitoring management behavior. In smaller firms, where owners are more likely to be involved in day-to-day operations, the alignment between ownership and control is stronger, leading to more prudent and necessity-driven cash management. Also, smaller firms, with simpler structures and limited scope, require less cash in absolute terms to manage day-to-day activities, though their cash holdings might represent a larger proportion of their total assets. On the other hand, smaller firms, which may operate in niche markets or have limited product offerings, face more volatile cash flows due to seasonal demand fluctuations or changing market conditions. This uncertainty could compel smaller firms to retain higher cash balances as a safety net, ensuring that they can weather periods of revenue shortfall or increased expenses. Thus, while large firms may have the financial capability to hold more cash, governance structures, firm-specific needs and agency considerations often play a role in how much cash is retained.

In Nigeria, many healthcare firms, especially those with small asset base, face significant liquidity challenges due to irregular payment structures from government agencies and private health insurance companies (Amahalu, Okudo & Eyide, 2023). These firms often struggle to maintain sufficient cash reserves to meet operational expenses, procure essential medical supplies, and invest in technological advancements. On the other hand, larger healthcare firms, such as multinational pharmaceutical companies and well-established hospital chains, may have more stable cash flows and diversified revenue streams that mitigate liquidity risks (Akpan, 2024). However, even large firms in the Nigerian healthcare sector are not immune to financial constraints, as they must contend with foreign exchange volatility, inflationary pressures, and regulatory compliance costs. The consequences of these financial challenges can be severe, ranging from reduced service delivery and operational inefficiencies to business closures and layoffs. Understanding how firm size influences cash levels can help healthcare firms develop effective financial strategies to enhance liquidity management, ensure business continuity, and improve overall industry stability. Given the importance of financial resilience in the healthcare sector, this study aims to examine the effect of firm size on cash levels among listed healthcare firms in Nigeria, an aim which existing researches have not robustly assessed.

1.2. Research Question and Hypothesis

The study intends to provide answers to the following research question:

To what extent does firm size affect cash levels among listed healthcare firms in Nigeria?

In lieu of the above research question, the study tests the null hypothesis that:

H0: *Firm size does not significantly affect cash levels among listed healthcare firms in Nigeria.*

2. Literature Review

2.1. Conceptual Issues and Theoretical Frameworks

Cash level refers to the amount of cash and cash equivalents that a firm holds at a given time. It represents the liquid assets available to meet short-term obligations, fund operational activities, and seize investment opportunities. The cash level of a firm is a critical component of liquidity management, ensuring financial stability and operational continuity (Nnubia, Ofoegbu & Nnubia, 2020). Theoretical perspectives on cash level vary. The Trade-Off Theory which stresses financial optimality (Ikwuo, Nwite, Nworie & Nworie, 2025) suggests that firms maintain an optimal cash level by

balancing the costs of holding excessive cash (such as opportunity costs) against the risks of financial distress due to cash shortages. The Pecking Order Theory, on the other hand, posits that firms prefer internal financing through retained earnings and cash reserves before resorting to external debt or equity issuance (Tahir, Alifiah, Arshad & Saleem, 2016). Firms with high cash levels are perceived as financially stable but may also be criticized for inefficiency in capital utilization, as excessive cash holdings may signal poor investment strategies or a lack of profitable projects (Okeke & Nworie, 2025).

Empirically, cash level is influenced by factors such as firm profitability, leverage, investment opportunities, and macroeconomic conditions (Nnubia, Ofoegbu & Nnubia, 2020). Larger firms often maintain higher cash reserves due to their extensive operational scale, while smaller firms may hold lower cash levels due to capital constraints (Ukoha & Udeh, 2024). High cash levels can enhance financial flexibility, allowing firms to navigate economic downturns and respond to market opportunities swiftly. However, prolonged retention of excessive cash without strategic deployment may indicate agency problems, where managers prioritize personal discretion over shareholder value maximization. In financial reporting, cash level is reflected in the statement of financial position under current assets. Analysts and investors assess cash levels using liquidity ratios such as the current ratio and cash ratio, which help determine a firm's ability to meet short-term obligations. Thus, cash level remains a crucial determinant of financial health and corporate decision-making (Ndu, Ifurueze & Amahalu, 2024).

On the other hand, firm size refers to the scale and magnitude of a company's operations, typically measured by total assets, revenue, market capitalization, or the number of employees (Yasin, Esquivias & Suyanto, 2021). Frances and Nworie (2025) firm size that it is a fundamental determinant of a firm's market power, resource availability, financial stability, and strategic positioning within an industry. Firm size influences various aspects of business performance, including access to capital, competitive advantage, risk exposure, and financial decision-making.

Theoretical perspectives on firm size emphasize its implications for efficiency and growth. The Resource-Based View (RBV) suggests that larger firms have greater access to resources, enabling them to achieve economies of scale, invest in innovation, and maintain competitive advantages (Nworie & Mba, 2022). The Agency Theory highlights how firm size can exacerbate managerial inefficiencies, as larger firms may experience higher agency costs due to the separation of ownership and control. Additionally, the Growth of the Firm Theory by Edith Penrose in 1959 explains that firms expand based on their ability to exploit internal resources and market opportunities (Sousa, Junior, Costa & Reis, 2021).

Apparently, it is often dubbed that larger firms tend to have better credit ratings, lower cost of capital, and greater bargaining power in financial markets (Kenton, 2024). They are also more likely to diversify risks across multiple business segments, making them more resilient to economic shocks. In contrast, smaller firms often face liquidity constraints, higher borrowing costs, and increased vulnerability to market fluctuations. However, smaller firms may exhibit greater flexibility and adaptability to market changes, which can be advantageous in dynamic industries. Firm size is commonly measured through indicators such as total assets, annual revenue, and market capitalization (Dang, Li & Yang, 2018). These metrics indicate firm's financial health, operational scale, and industry standing. As a key determinant of business strategy and financial performance, firm size plays a crucial role in shaping corporate policies and investment decisions, although only natural log of total assets was used to measure firm size.

The relationship between firm size and cash level is a widely discussed topic in corporate finance, reflecting how organizational scale impacts financial behavior, particularly in liquidity management. Firms accumulate cash for various strategic, operational, and precautionary reasons, but the amount of cash a firm holds can vary significantly depending on its size. While some scholars argue that larger firms tend to hold less cash relative to their total assets due to easier access to capital markets and more predictable cash flows, others contend that larger firms may hold more cash in absolute terms to support diversified operations and international activities. Understanding this dynamic is vital for corporate decision-makers, investors, and policymakers as it influences investment strategies, risk assessment, and financial stability. Larger firms typically enjoy greater access to external financing compared to their smaller counterparts. This access stems from enhanced creditworthiness, strong reputations, and long-standing relationships with financial institutions, allowing them to secure loans or issue equity with relative ease. Because of this advantage, larger firms may not need to hold excessive cash reserves as a buffer against unforeseen contingencies. They can rely on external sources to meet their liquidity needs in times of financial distress or unexpected opportunities. In contrast, smaller firms often face challenges in accessing external finance due to higher perceived risk, lack of collateral, or limited credit history. As a result, small firms tend to maintain higher cash levels relative to their size as a self-insurance mechanism, preparing for periods of limited liquidity or financial turbulence.

2.2. Synthesis of Empirical Review on Firm Size and Cash Level

Several studies, such as those by Ndu, Ifurueze, and Amahalu (2024) and Ukoha and Udeh (2024), support the notion that firm size positively influences cash holdings, suggesting that larger firms accumulate more cash reserves. This aligns with the findings of Naumoski and Ruseva (2022), who reported that cash holdings tend to rise with company size in Macedonian manufacturing firms. These results may be attributed to the financial stability of larger firms, which enables them to generate and maintain higher cash reserves. Conversely, some studies present an opposing view. For instance, Noke, Oliver, and Udeh (2024) discovered a significant negative correlation between firm size and cash holdings in the food and beverage sector, indicating that larger firms hold less cash. Similarly, studies by Amahalu and Okudo (2023) and Azzahra and Sukmaningrum (2022) found that firm size negatively affects cash holdings, possibly due to easier access to external financing, reducing the need for high cash reserves.

Further analysis shows that industry differences and economic environments influence the relationship between firm size and cash holdings. Vuković et al. (2022) demonstrated that larger wholesale firms hold less cash, supporting the idea that firms in capital-intensive industries rely more on external funding. Similar results were obtained by Ali et al. (2021) and Kwan and Lau (2020), who reported negative relationships between firm size and cash holdings in non-bank financial firms and hospitality firms, respectively. However, within the banking sector, Nwokoye (2022) found an insignificant negative relationship between bank size and cash holdings, indicating that while size might reduce the need for excess cash, it does not always have a strong influence. On the contrary, some studies found no significant effect of firm size on cash holdings, such as Muhammad (2022) in the real estate sector and Wijaya (2021) in agricultural firms. This suggests that in some industries, factors other than firm size—such as liquidity needs, investment opportunities, and regulatory requirements—play a more critical role in determining cash reserves.

Large multinational corporations may accumulate significant cash reserves overseas to avoid repatriation taxes in their home countries. These retained earnings are kept in foreign subsidiaries, leading to a buildup of cash even if the firm has no immediate domestic use for it. Such practices are not common among small firms, which are typically domestic-focused and do not face the same tax deferral incentives. Therefore, firm size, particularly in the context of international operations, can lead to substantial differences in cash holding strategies due to tax planning and global financial management considerations. Moreover, while larger firms might have lower cash-to-assets ratios, they often hold higher cash amounts in absolute terms; also, firm size might negatively correlates with the ratio of cash holdings to total assets but positively correlates with the overall volume of cash held. This duality reflects the complex interplay between operational needs, financial strategy, risk management, and corporate governance (Azzahra & Sukmaningrum, 2022). It suggests that the relationship between firm size and cash level cannot be generalized without considering other influencing factors such as industry dynamics, lifecycle stage, financial constraints, and macroeconomic conditions. In fact, the stage of the firm in its lifecycle could also plays a role in determining cash levels. Startups and growth-oriented small firms, despite being small in size, may require large cash buffers to support expansion, product development, and market penetration efforts. Meanwhile, mature large firms might reduce cash holdings after establishing stable revenue streams and operational efficiencies. Nonetheless, some large firms continue to accumulate cash for strategic acquisitions, research and development, or to signal financial strength to investors and competitors. These strategic motives may override the typical size-cash relationship, highlighting that managerial intentions and competitive positioning also affect cash holding behavior.

The mixed findings in the literature highlight the complexity of the firm size-cash holdings relationship, emphasizing the need for context-specific considerations. While studies like those by Nnubia et al. (2020) indicate that firm size significantly influences cash holdings in some regions (e.g., South Africa) but not in others (e.g., Nigeria and Kenya), Endri et al. (2020) found that firm size was only partially insignificant in coal mining companies. The variations across industries and regions suggest that firm size alone cannot fully explain cash-holding behavior, necessitating further investigation into additional factors such as financial policies, market conditions, and firm-specific strategies. For healthcare firms in Nigeria, where financial constraints and regulatory requirements may influence cash management, it is crucial to explore whether firm size remains a primary determinant of cash reserves or if other factors, such as access to credit and operational efficiency, play a more significant role. Based on the review, firm size exerts a considerable influence on the level of cash held by a firm, but this influence is multifaceted and context-dependent. Larger firms tend to hold less cash relative to their assets due to better access to capital markets, more stable cash flows, and efficient cash management practices. However, they often maintain higher absolute cash balances due to the sheer scale of their operations and international exposure. Smaller firms, constrained by financing limitations and higher cash flow volatility, maintain proportionately higher cash levels as a precautionary measure. The complexity of this

relationship underscores the importance of considering multiple variables—such as governance, taxation, firm lifecycle, and strategic objectives—when analyzing how firm size affects cash holding behavior.

3. Methods

This study adopts an ex-post facto research design to examine the effect of firm size on cash levels among listed healthcare firms in Nigeria. The choice of an ex-post facto research design is justified as it allows for the use of historical data to investigate relationships between past events without manipulating variables (Aggreh, Abiahu & Nworie, 2023). Given that financial data is collected retrospectively, this design is suitable for assessing how firm size has influenced cash levels over time within the healthcare sector.

The study population comprises healthcare firms listed on the Nigerian Exchange Group as of December 31, 2023. These firms form the basis for data collection and analysis, as outlined in Table 3.1 below.

Table 1. Study Population

1. Fidson Healthcare Plc
2. Mecure Industries Plc
3. May & Baker Nigeria Plc
4. Morison Industries Plc
5. Neimeth International Pharmaceuticals Plc
6. Pharma-Deko Plc
7. Ekocorp Plc

Source: Nigerian Exchange Group (2023)

A purposive sampling technique was employed to select firms that provided complete financial data from 2014 to 2023. Firms with missing financial reports for critical years were excluded. The final sample consists of five firms, as shown in Table 3.2 below.

Table 2. Study Sample Size

1. Fidson Healthcare Plc
2. May & Baker Nigeria Plc
3. Morison Industries Plc
4. Neimeth International Pharmaceuticals Plc
5. Pharma-Deko Plc

Source: Researcher's Compilation (2025)

The study utilizes secondary data obtained from the annual reports of the sampled healthcare firms. Covering a ten-year period from 2014 to 2023, financial statements were analyzed to extract relevant variables, including firm size and cash levels. In total, 50 firm-year observations were generated for analysis. Both descriptive and inferential statistical methods were applied. Descriptive analysis involved calculating mean, standard deviation, and range values to summarize firm characteristics. Inferential analysis was conducted using Ordinary Least Square technique to examine the relationship between firm size and cash levels. The analysis was performed at a 5% significance level. Thus, the estimation was conducted at a 5% significance level. If the probability value (p-value) is below 5%, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a significant effect of firm size on cash levels. Conversely, if the p-value is above 5%, the null hypothesis is accepted, signifying no significant relationship

The study variables include cash levels (proxied by cash and cash equivalents), and firm size. Their measurement criteria are outlined in Table 3.3 below.

Table 3. Operational Measurement of Variables

Variable	Measurement Formula	Source
Cash Level	(Cash and Cash Equivalents) / (Total Assets)	Adapted from Ndu, Ifurueze, and Amahalu (2024)
Firm Size	Natural Log of Total Assets	Adapted from Ndu, Ifurueze, and Amahalu (2024)

Source: Researcher's Compilation, 2025

The model used in this study was adapted from Ndu, Ifurueze, and Amahalu (2024) to examine the relationship between firm size and cash levels. For this study, the model was modified to focus on firm size and its effect on cash levels, leading to the following equation:

$$CLEVit = \beta0 + \beta1SZEit + ų$$

where:

CLEV = Cash level
SZE = Firm Size
β0 = Intercept
β1, β2, β3 = Parameters
ų = Stochastic error term

4. Result and Discussions

4.1. Descriptive Analysis

Table 4. Descriptive Analysis

	CLEV	SZE
Mean	0.073446	6.638008
Median	0.026310	6.442183
Maximum	0.409046	7.792330
Minimum	0.002417	5.589602
Std. Dev.	0.096303	0.582618
Skewness	1.779355	-0.109582
Kurtosis	5.443599	2.170454
Jarque-Bera	38.82414	1.533708
Probability	0.000000	0.464472
Sum	3.672318	331.9004
Sum Sq. Dev.	0.454442	16.63275
Observations	50	50

Source: Output from Eviews 10 (2025)

From Table 4.1, the mean cash level (CLEV) is 0.073446, indicating that, on average, the listed healthcare firms in Nigeria have 7.34% of their total assets in cash and cash equivalents over the period from 2014 to 2023. The maximum cash level of 0.409046 suggests that, at its highest point, a firm had approximately 40.90% of its total assets in cash, while the minimum cash level of 0.002417 reflects that, at its lowest, a firm had just 0.24% of its total assets in cash. The standard deviation of 0.096303 shows that there is considerable variation in cash levels across the firms, with a relatively wide spread around the mean. The positive skewness of 1.779355 indicates a rightward skew, meaning most firms have lower cash levels, with a few firms exhibiting much higher levels. The kurtosis of 5.443599 suggests that the distribution of cash levels is leptokurtic, implying a higher peak and heavier tails than a normal distribution, which could indicate that most firms have low to moderate cash levels, with a few having extremely high cash holdings. The Jarque-Bera probability of 0.000000 indicates that the cash level distribution significantly deviates from normality, with a very low probability of it following a normal distribution.

The firm size (SZE) in Table 4.1 has a mean value of 6.638008, reflecting the natural log of total assets for the listed healthcare firms, suggesting that on average, these firms have a moderate size. The maximum firm size is 7.792330, which shows the largest firm in the sample has a relatively higher total asset size compared to the rest, while the minimum value of 5.589602 indicates the smallest firm has a considerably lower asset size. The standard deviation of 0.582618 indicates moderate variation in the size of the firms, implying that there is a reasonable level of diversity in the firms' asset sizes. The negative skewness of -0.109582 shows a slight leftward skew, meaning the distribution of firm sizes is relatively balanced, with a slight tendency toward smaller firms. The kurtosis of 2.170454 is close to 3, suggesting the distribution of firm sizes is relatively normal, with neither excessively flat nor peaked tails. The Jarque-Bera probability of 0.464472 indicates that the firm size data is not significantly different from a normal distribution, as the p-value is greater than the typical threshold of 0.05.

4.2. Test of Hypothesis and Discussion of Finding

H0: *Firm size does not significantly affect cash levels among listed healthcare firms in Nigeria.*

The regression result is presented in Table 4.2 below.

Table 5. Test of Hypothesis

Dependent Variable: CLEV
Method: Least Squares
Date: 02/09/25 Time: 01:03
Sample: 1 50
Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
SZE	0.052022	0.022646	2.297195	0.0260
C	-0.271874	0.150889	-1.801815	0.0779

R-squared	0.099050	Mean dependent var	0.073446
Adjusted R-squared	0.080280	S.D. dependent var	0.096303
S.E. of regression	0.092357	Akaike info criterion	-1.887138
Sum squared resid	0.409429	Schwarz criterion	-1.810657
Log likelihood	49.17844	Hannan-Quinn criter.	-1.858013
F-statistic	5.277106	Durbin-Watson stat	1.205221
Prob(F-statistic)	0.026012		

Source: Output from Eviews 10 (2025)

In Table 4.2, the regression results show an R-squared value of 0.099050, meaning that approximately 9.91% of the variation in cash levels (CLEV) among the listed healthcare firms is explained by firm size (SZE). This suggests a relatively weak explanatory power of the model, indicating that other factors not included in the model may also be influencing cash levels. The Prob(F-statistic) of 0.026012 is less than the 0.05 significance level, indicating that the overall model is statistically significant at the 5% level. In other words, the model as a whole provides a meaningful explanation of the variation in cash levels. The constant term (C) is -0.271874, with a probability of 0.0779. This suggests that when firm size (SZE) is zero, the cash level (CLEV) would be -0.271874, although the p-value is above the 0.05 significance threshold, meaning that the constant term is not statistically significant at the 5% level.

The coefficient for firm size (SZE) is 0.052022, which implies that for every one-unit increase in the natural logarithm of total assets (firm size), the cash level (CLEV) is expected to increase by 0.052022 units, assuming all other factors remain constant. This suggests a positive effect of firm size on cash levels, indicating that larger firms tend to hold more cash relative to their total assets. The p-value associated with this coefficient is 0.0260, which is less than the 0.05 significance level, indicating that the effect of firm size on cash levels is statistically significant at the 5% level. This means that firm size has a significant positive effect on cash levels of listed healthcare firms in Nigeria (b = 0.052022; p-value = 0.0260).

The finding that firm size has a significant positive effect on cash levels among listed healthcare firms in Nigeria suggests that larger firms tend to hold more cash relative to their total assets. This result is consistent with the idea that bigger firms typically have better access to financing, but also face greater operational and strategic demands, leading them to maintain higher liquidity as a precaution. Larger firms may prefer to hold more cash to ensure they can meet their financial obligations, handle unexpected financial needs, or capitalize on investment opportunities without having to rely heavily on external financing. This finding might also reflect the risk aversion in larger organizations, where cash reserves serve as a buffer against economic fluctuations. Moreover, large firms can afford to keep more cash because they have more stable cash flows and less volatility in their operations, which allows them to hold cash without significant opportunity costs.

Several studies support this finding. For instance, Ndu, Ifurueze, and Amahalu (2024) found a significant positive relationship between firm size and cash holdings in Nigerian pharmaceutical firms, reporting a coefficient of 0.356278 with a p-value of 0.0005, indicating that larger firms hold significantly more cash. Similarly, Ukoha and Udeh (2024)

reported a significant positive effect of firm size on the cash ratio of non-financial firms in Nigeria, with a coefficient of 0.0440 and a p-value of 0.0000. These findings align with the notion that larger firms tend to hold more cash as they face higher financial demands and more complex operations. However, not all studies agree with this result. For example, Amahalu and Okudo (2023) found a significant negative relationship between firm size and the cash ratio in Nigerian conglomerates, suggesting that larger firms in certain sectors might opt for more external financing or prefer investing excess cash in long-term assets rather than holding it as liquidity. Additionally, Noke, Oliver, and Udeh (2024) reported a significant negative correlation between firm size and cash holdings in Nigeria's food and beverage sector, suggesting that larger firms in that industry might have more access to external funds, reducing their need to hold cash.

5. Conclusions

The findings of this study indicate that firm size has a significant positive effect on cash levels among listed healthcare firms in Nigeria. This suggests that as firms grow in size, their ability to maintain higher cash balances increases. This relationship highlights the financial dynamics within the healthcare sector, where larger firms may benefit from increased revenue generation, operational efficiencies, and better access to financial resources, enabling them to hold more cash. The ability of larger firms to sustain higher cash levels can serve as a buffer against financial uncertainty, ensuring smoother operations and stability in the sector. Furthermore, the positive effect of firm size on cash levels implies that growth in firm size may be accompanied by a proportional increase in liquidity. This trend can influence financial decision-making, as firms with more cash reserves may have greater flexibility in capital allocation, debt management, and investment opportunities. The accumulation of cash in larger firms could also reflect a strategic approach to managing financial risks and uncertainties in the healthcare industry, where economic fluctuations and regulatory changes may impact cash flow. This finding underscores the financial advantages that come with firm expansion, as size plays a crucial role in determining liquidity levels. The study recommends that small healthcare firms should prioritize strategic growth initiatives such as mergers, acquisitions, or market expansion to increase their size and enhance their ability to accumulate and maintain higher cash reserves.

5.1. Contribution to Knowledge

This study contributes to knowledge by providing empirical evidence on the relationship between firm size and cash levels in the Nigerian healthcare sector, an area with limited prior research. By employing an ex-post facto research design and analyzing secondary data from listed healthcare firms over a ten-year period (2014–2023), the study establishes a statistically significant positive effect of firm size on cash holdings. This finding enhances the understanding of liquidity management within the sector, demonstrating that larger firms have a greater capacity to maintain higher cash reserves. The study also adds to financial management literature by highlighting the implications of firm size on cash retention strategies, which can inform decision-making for healthcare firms, investors, and policymakers.

5.2. Limitation of the Study and Suggestion for Further Studies

A key limitation of this study is its focus on only listed healthcare firms in Nigeria, which restricts the generalizability of the findings to non-listed or privately owned healthcare firms that may operate under different financial constraints. Subsequent researchers should expand their sector of focus. The relatively small sample size of five listed healthcare firms further limits the robustness of the findings, as a larger sample could provide more comprehensive perspectives. Thus, researchers in the future should endeavour to increase the sample size.

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