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Financial Reporting Quality and Labour Investment Efficiency in Selected Manufacturing Companies in Nigeria

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Abstract: *This study examined financial reporting quality and labour investment efficiency in selected manufacturing firms in Nigeria. The objectives were to investigate the impact of timeliness of financial report on labour investment efficiency of selected manufacturing firms in Nigeria; determine the impact of completeness of financial report on labour investment efficiency of selected manufacturing firms in Nigeria; and examine the impact of transparency of financial report on labour investment efficiency of selected manufacturing firms in Nigeria. Expost facto design was adopted. Data were collected from financial reports of Cadbury Nigeria Plc, Dangote Plc, Nigerian Breweries Plc and Guinness Nigeria Plc covering the period 2011 to 2023. The data were subjected to unit root test, cointegration, and multiple linear regressions. Findings revealed that timeliness of financial report has negative and insignificant impact on labour investment of selected manufacturing firms in Nigeria; Completeness of financial report has positive and significant impact on labour investment of selected manufacturing firms in Nigeria; transparency of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria. It concluded that financial reporting quality positively impacts on labour investment*

efficiency. Regulators and stakeholders could improve the firms' financial reporting quality and labour investment efficiency by strengthening the monitoring role of the top management team and ensuring timeliness in their financial reports. Executives should ensure shaping the firms' future by giving more attention to labour recruitment and retention

Keywords: financial reporting quality, labour investment efficiency, manufacturing companies, Nigeria

INTRODUCTION

Background to the study

Financial reporting quality (FRQ) is critical in global stock markets, including the one in Nigeria. Many scholars have recently emphasized improving FRQ to reduce information asymmetry and enhance market transparency (Le, Lai, Vu & Vu, 2023). The concept of a quality financial report is not only for containing financial information but also non-financial, which will be useful in making an economic decision (Herath & Albarqi, 2017; Asyik, Muchlis, Riharjo, & Rusdiyanto 2022).

Studies have shown that high financial reporting quality has the following Characteristics-Transparency, Timeliness, Consistency, Completeness, Unbiased; and Relevant (Asyik, Agustia, & Muchlis, 2023). The quality of financial report was studied from two distinct aspects: First, the quality of a financial report shows the company's performance, which reflected on the profit information. It can also be said that financial report information has a high quality if the profit obtained in the current year can be used as an indicator to generate profit in the future (Dang, Nguyen & Tran, 2020) or as cash revenue in the future (Noury, Hammami, Ousama & Zeitun, 2020). Second, the quality of financial reporting is related to the company's market performance, which is listed in the stock exchange market. The strong relationship between profit and a stock's market price proved that financial reporting information will be responded to positively by either the market or investors (Dang et al., 2020).

Furthermore, the importance of investment has been emphasized by scholars (Gomariz & Ballesta, 2014; Hidayat & Mardijuwono, 2021); especially in the context of manufacturing firms. These firms play an integral role in analyzing and supplementing general financial data with in-depth industry insights to provide useful information for performance evaluation and decision making. In recent years, firms have gradually integrated financial reporting quality into their business activities, and research on corporate social responsibility such as labour is taking the centre stage. Labour investment is an indispensable investment of a firm. Effective labour investment can improve productivity, income, and competitiveness (Yuan, Yu & Yin, 2024). Many scholars have explored the influencing factors of labour investment efficiency, among which information asymmetry is one of the main causes. Jung et al. (2014) reveal that high-quality accounting information improves the information environment, thus promoting external supervision. Hence,

it reduces the agency costs of managers' self-interested behavior and alleviates the financing costs caused by adverse selection, resulting in more efficient labor investment. High stock price informativeness can also enhance labour investment efficiency, because it provides an improved information environment, which will lead to better supervision of managers (Ben-Nasr & Alshwer, 2016). Bai et al. (2023) documented that diversified enterprises are faced with a more complex external environment, and their accounting information is more difficult to interpret. Higher agent costs inside diversified enterprises also make employment decisions more inefficient.

Assessing financial report quality for labour investment is crucial in reducing the risk of inefficient investment. Beest et al. (2009) assert that high-quality financial reporting information is critical in positively influencing stakeholder financing, credit, and resource allocation decisions, thus, enhancing labour efficiency. A high financial reporting quality is associated with increased investment efficiency (Wajeetongratana et al., 2019; Hung et al., 2020). Moreover, studies have demonstrated that high-quality financial statements can improve labour investment efficiency by minimizing market conflicts and agency issues (Roychowdhury et al., 2019; Wajeetongratana et al., 2019). According to agency theory, managers tend to act in their self-interest rather than maximizing benefits for the organisation (Biddle et al., 2009). Poor information transparency can allow managers to use firm resources for self-serving projects, leading to overinvestment (Alhadi et al., 2021). Conversely, managers may underinvest by abandoning positive present-value projects or rejecting highly productive projects to boost short-term business results, receiving high salaries and bonuses. Competition is a moderating variable in the relationship between FRQ and IE (Alhadi et al., 2021).

Prior studies suggest that higher quality financial reporting should increase investment efficiency (Biddle, Gilles & Verdi. 2019). Consistent with this argument, Biddle and Hilary (2016) find that firms with higher quality financial reporting exhibit higher investment efficiency proxied by lower investment-cash flow sensitivity. However, investment-cash flow sensitivity can reflect either financing constraints or an excess of cash (Biddle, Gilles & Verdi. 2019). These findings raise the further question of whether higher quality financial reporting is associated with a reduction of over-investment or with a reduction of under-investment.

Statement of the problem

A large body of literature indicates that firms can reduce information asymmetries by enhancing financial reporting quality (Elberry & Hussainey, 2020; Hidayat & Mardijuwono, 2021). Additionally, labour investment efficiency strongly influences the performance and sustainable development of firms, which is of great interest to managers, investors, owners and other stakeholders (Chen et al., 2011; Gomariz & Ballesta, 2014). Financial reporting quality has been argued to play a crucial role in enhancing investors' confidence, assisting firms in mitigating risks during challenging times and strengthening their competitiveness. Researchers have also argued that reduction in adverse selection and moral hazard, enables managers to identify better investment opportunities and enhance labour investment efficiency. However, labor investment

inefficiency results in increasing agency costs, particularly through the existence of poor monitoring and an impervious informational environment (Jung et al., 2014; Huang and Tarkom, 2022). Jung et al. (2014) showed that high-quality financial reporting is an impetus to reduce agency conflicts and enhance investment efficiency. This shows that there is no consensus on how quality reporting may influence labour investment efficiency as there seems to be higher cost associated with labor efficiency while some of these studies have been carried out in several organizations, very few have investigated manufacturing companies in Nigeria. The problem therefore is to determine whether financial reporting quality enhances labour investment efficiency in selected listed manufacturing firms in Nigeria hence the need for this study. Previous studies explored various financial reporting quality characteristics with different variables but the justification for the relationship between studied variables and labor investment efficiency is inconclusive. This study is therefore conducted to perform an in depth study into the effects of financial reporting quality components and labour investment efficiency of listed manufacturing firms in Nigeria. This is done to add to existing literatures and to further establish and improve on existing findings.

Objectives of the study

This study assessed the effect of financial reporting quality and labour investment efficiency. Other objectives of the study include:

i. to investigate the timeliness of financial report impacts on labour investment of selected manufacturing firms in Nigeria.
ii. to determine the impact of completeness of financial report on labour investment of selected manufacturing firms in Nigeria.
iii. to examine the impact of transparency of financial report on labour investment of selected manufacturing firms in Nigeria.

Research questions

This study is aimed at finding answers to the following relevant questions:

1. To what extent do timeliness of financial report impacts on labour investment of selected manufacturing firms in Nigeria?
2. What impact does completeness of financial report have on labour investment of selected manufacturing firms in Nigeria?
3. What is the impact of transparency of financial report on labour investment of selected manufacturing firms in Nigeria?

Research hypotheses

The following hypotheses were tested in the study:

H_{01}: Timeliness of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria

H_{02}: Completeness of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria

H_{03}: Transparency of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria

REVIEW OF RELATED LITERATURE

Financial Reporting quality

According to IASB, the essential principle of assessing the financial reporting quality is related to the faithfulness of the objectives and quality of disclosed information in a company‘s financial reports. These qualitative characteristics enhance the facilitation of assessing the usefulness of financial reports, which will also lead to a high level of quality. To achieve this level, financial reports must be faithfully represented, comparable, verifiable, timely, and understandable. Thus, the emphasis is on having transparent financial reports, and not having misleading financial reports to users; not to mention the importance of preciseness and predictability as indicators of a high financial reporting quality (Gajevszky, 2015).

As it is defined in the *Conceptual Framework for Financial Reporting* of the FASB and the IASB, there are agreed upon elements of high quality financial reporting. The qualitative characteristics of financial reporting quality include: relevance, faithful representation, understandability, comparability, verifiability, and timeliness. They are divided into fundamental qualitative characteristics and enhancing qualitative characteristics. A theoretical explanation for each of these terms emphasizes their importance as qualitative characteristics, and also indicates what qualities are considered fundamental among different frameworks.

Relevance

Relevance is closely associated with the terms usefulness and materiality. Relevance illustrates the capability of making decisions by users. When information in financial reports influences users in their economic decisions, it is sad that this information has the quality of relevance. Also, when this information assists users to evaluate, correct, and confirm current and past events, it is useful. The usefulness of making a decision—an important part of relevance—is consistent with the conceptual framework (Cheung, Evans, & Wright, 2010). Fair value is considered one of the highly significant indicators of relevance. Using Fair Value in an entity, as a basis for measurement, is an indicator of a high level of relevance in financial reporting information (Beest, Braam, & Boelens, 2009). Annual reports have a crucial role in determining the level of relevance by disclosing forward-looking information, disclosing information about business opportunities and risks, and providing feedback on how major market events and significant transactions affected entities (Beest, Braam, & Boelens, 2009).

Reliability

Reliability is another critical factor of financial reporting quality. In financial reporting, information must have the quality of reliability in order to be useful. This quality is achieved when

information, which users depend upon, is free from bias and material mistakes. Reliability is analyzed based on the qualities of faithful, verifiable, and neutral information (Cheung, Evans & Wright, 2010).

Comparability

Comparability is the concept of allowing users to compare financial statements to determine the financial position, cash flow, and performance of an entity. This comparison allows users to compare across time and among other companies in the same period. As Cheung, Evans & Wright (2010) remarked: ―Comparability demands that identical events in the two situations will be reflected by identical accounting facts and figures . . . different events will be reflected by different accounting facts and figures in a way which quantitatively reflects those differences in a comparable and easily interpretable manner‖. (Cheung et al.2010). To indicate this point, the notes in financial reports should disclose and explain all the changes in accounting policies and the implications of these changes, not to mention the importance of consistency in applying accounting policies and principles. Also, the current accounting period results can be compared with the ones from previous periods. Lastly, presenting financial index numbers and ratios contributes to the comparison with other organizations (Beest et al., 2009).

Understandability

Understandability is one of the essential qualities of information in financial reports. Achieving the quality of understandability is through effective communication. Thus, the better the understanding of the information from users, the higher the quality that will be achieved (Cheung, Evans, & Wright, 2010). It is one of the enhancing qualitative characteristics that will increase when information is presented and classified clearly and sufficiently. When annual reports are well organized, users can comprehend what their needs are (Beest, Braam, & Boelens, 2009). Usage of graphs and tables helps to present information clearly, and the usage of language and technical jargon can be followed easily.

Timeliness of financial report

Timeliness is another enhancing qualitative characteristic. Timeliness illustrates that information must be available to decision makers before losing its powerful and good influences. When assessing the quality of reporting in an annual report, timeliness is evaluated using the period between the year-end and the issuing date of the auditor‘s report—the period of days it took for the auditor to sign the report after the financial year-end (Beest, Braam, & Boelens, 2009).

Transparency of financial report

The Internal audit size (IAS), is essential to improve performance of companies. The size of internal audit is measured by the number of internal audit seating on the committee of the internal audit department. Shaver (2005), argued that larger boards are often characterized by responsibility diffusion, which leads to social loafing, it encourages group fractionalization and

minimizes group commitment to modifying strategy. From the perspective of resource dependence theory, it further postulates that larger board size would result in superior corporate performance owing to the various skills, knowledge, and expertise contributed into the boardroom debate. In addition, large boards could also offer the diversity that would assist companies to obtain critical resources and minimize environmental risks.

Faithful representation

Faithful representation is the concept of reflecting and representing the real economic position of the financial information that has been reported. This concept has the value of explaining how well the obligations and economic resources, including transactions and events, are fully represented in the financial reporting. Moreover, this quality has neutrality—as a sub notion—which is about objectivity and balance. According to Willekens (2008), ―researchers concluded that the auditors'report adds value to financial reporting information by providing reasonable assurance about the degree to which the annual report represents economic phenomena faithfully. Additionally, how business organizations are controlled and directed affects the faithful presentation quality; this, in fact, is represented as a corporate governance factor when there is extensively disclosed information on corporate governance issues in the annual report (Beest, Braam, & Boelens, 2009). Besides, the annual report clarifies assumptions and estimates and explains the usage of the accounting principles in the company clearly. It also highlights positive and negative changes and events by discussing them in the annual results. The last important factor that strengthens this quality is having an unqualified auditor's report in the annual report.

Usefulness of quality financial reporting

An organization which organized the accounting standards fully support that financial reports have the purpose of presenting financial information which will benefit users (Asyik, Agustia & Muchlis, 2023). The purpose is to have a better understanding of the firm's financial position (IASB, 2018; Rusdiyanto et al., 2021). Thus, users can make economic decisions. Accounting information is used to evaluate the business performance, and it is also useful for owners to do some analysis in evaluating business operation. Financial ratios can be used as an indicator to compare its performance against other firms within the same business or industry standard (Vitez & Seidel, 2019). This can help owners to understand how good its company is, compared to others.

Approaches to measure and assess accounting quality

Assessing the quality of financial reporting requires a broad range of measurements using models, proxies, qualitative characteristics, and other elements of financial reports (Herath & Albarqi, 2017). In the literature, three different dimensions of financial reporting quality are frequently used: Accrual-Based Models, Accounting Conservatism, and Earnings Managements (abnormal accrual). Many approaches have been used to measure and assess financial reporting quality, and new approaches are still being developed. In this paper, some of the approaches are used—in the literature, for example—to measure and assess the financial reporting quality: Standardized Score, Accrual-based models (or Accruals Quality), Beneish model's ―M-Score,‖ Indices (or scores)

method of Internal Control, and the degree of Accounting Conservatism. In the literature and prior studies, the reason behind the large reliance upon using indirect measures (e.g. proxies for the financial reporting quality or stock prices) is that some of the financial reporting qualities are unobservable (Abernathy, 2010).

Using standardized scores

Assessing the quality of financial reporting requires computing standardized scores using the fundamental and enhancing qualitative characteristics listed previously. By equally weighing the fundamental qualitative characteristics, the standardized scores of the fundamental qualitative characteristics are calculated by adding the standardized scores of relevance and faithful representation and dividing them by 2. The same process is applied for enhancing qualitative characteristics. The results will be shown in scores from 1 to 5—implying a poor score and an excellent score respectively—for the qualitative characteristics. Thus, quality of financial reporting is measured by melding the scores of the fundamental and the enhancing qualitative characteristics. This approach has a unique way of measuring the quality of financial reporting. It is a compound tool to assess the quality of the financial and non-financial information in the annual reports comprehensively. This tool considers all the aspects of decision-usefulness as they are defined in the Exposure Draft (ED)—released by FASB. According to Beest, Braam, & Boelens (2009), ―…None of these measurement methods enables a comprehensive assessment of financial reporting quality including all qualitative characteristics as defined in the Exposure Draft ‗An improved Conceptual Framework for Financial Reporting'[ED] of the FASB and the IASB (IASB, 2008).

On the other hand, to assess the quality of financial reporting, all other indirect-measurement tools focus on specific attributes that are expected to influence the quality of financial reporting, and on information disclosed in the financial statements. To emphasize this point, earnings management is used to highlight the quality of earnings instead of focusing on the quality of financial reporting as the primary objective (Beest, Braam, & Boelens, 2009). Earnings quality is defined as the level to which the economic reality and the company's financial performance are reflected; however, the quality of financial reporting has a broad range. It is not restricted to the financial information, but it also refers to other non-financial information and disclosures that are useful to the decision making by users. Thus, this tool reflects the qualitative characteristics because they all lead to achieving the decision usefulness of financial reporting information. In the literature, the value-relevance can determine the elements and qualitative characteristics in annual financial reports (Beest et al., 2009).

Accrual quality or accrual-based models

Accrual Quality is a significant model that has been used to measure the quality of financial reporting. It is known under the accrual basis in accounting that revenues are recognized separately from cash collection, and expenses are recognized separately from cash payment. In general, and

within the operating cycle before or after accrual, the entity cash flows should match its accrued revenue and expense. Nevertheless, the actual match between them varies in practice among entities and over time. Thus, accrued estimations of generated revenues or derived costs might be more than the cash that is actually collected from revenues or paid for costs. Research on Accrual Quality has led to the acceptance and approval of this approach (Pounder, 2013). This has resulted in a significant improvement in measuring the quality of financial reporting.

The Accrual Quality approach concentrates on the level of uncertainty of an entity‘s cash flow to the accrual correspondence. Theoretically, the more variability between the accruals and the cash flows in an entity during the operation cycle, the lower the entity‘s Accrual Quality, therefore, the lower the quality of the entity‘s accounting (Pounder, 2013). It is considered as an indirect method, and it is based on observation. In addition, it was used by Dechow and Dichevs to measure discretionary accruals, and check robustness (Gajevszky, 2015). It also demonstrates the connection between accruals and earnings quality. Moreover, measurement error in accruals affects the Accrual Quality.

This error is created by assumptions and estimates—the basis of the accrual—and it should be corrected (Hashim, 2012). One of the functions of the accrual-basis accounting tool is the ability to provide the forecasting of better future cash flows. When the current net income is informative about future cash flows‘ performance, financial reporting quality is deemed higher (Hope, Thomas & Vyas, 2011). In some of the literature, studies assess the quality of financial reporting when these two accrual models have been adopted—Dechow et al. (1995) model, and Kothari et al. (2005) model (Gajevszky, 2015).

Beneish Model or “M-Score,”

This approach is considered as a direct measure of the quality of financial information. The M-Score uses eight variables and these variables are based on quantitative accounting metrics such as the number of sales in accounts receivable. Also, the M-Score shows the level of an entity‘s reported earnings and how they are likely to be manipulated by management (Pounder, 2013).

Indexes (or scores) method of internal control

Finance researchers often use this method to measure the presence of items in the internal control system. It is considered a valid measuring tool (Herath & Albarqi, 2017). The method contains a description of elements that are selected in accordance with the research representativeness in the system to be measured. The score ―1‖ for the item that needs to be measured qualifies as relevant, and a score of ―0‖ qualifies as not relevant. After scores have been assigned, they can be compared to one another. This process allows for creating groups and testing variables by the scores received. Thus, to compare information in disclosures, various aspects—e.g. reliability, representativeness, relevance, and accessibility—have been measured through this tool. Hence, this index permits measurement of the quality of reporting systems and financial disclosures when using a sample of

listed companies. As a result, the better the internal reporting quality is, the better the quality of financial reporting should be (Lius, 2011).

Persistence of accruals

Persistence of Accruals is a measure of financial reporting quality. This test has the advantages of precise controls for cash flow persistence, not just relying on measures that are unobservable (Walker, Zeng, & Lee, 2013).

Degree of earnings management

The degree of earnings management is often measured using management discretion over accruals, and faithful representation is measured using the negative of earnings management through accrual (Choi & Pae, 2011). To summarize, in the literature, some of the studies suggest using more than one measurement, based on the nature of the factors that need to be measured. Some of the situations require using more measurements because of the large-scale of their samples; and some of the tools will not cover all the factors associated with financial reporting quality. Also, the use of multiple proxies supports generalizing results. Moreover, using alternative measures reduces the possibility that other measures may not demonstrate. To illustrate this point, some studies need to employ measures to highlight several dimensions of the financial reporting quality at the same time, such as applying accruals persistence, cash flow predictability, and accruals quality (Chen 2011).

Labour

Labour represents human effort towards production (Bhatia, 1978). Adam Smith in his time recognized the indispensable nature of labour towards production. For him labour was the first price, the original purchase money that was paid for all things. In his opinion, it was not by gold or silver, but by labour that all wealth of the world was originally purchased. The views such as the one by Adam Smith have propelled the overwhelming interests witnessed in the issues concerning labour management (Chidi & Ikem, 2017).

Labour investment efficiency

Labour investment has to do with investing in people through nutrition, health care, quality education, jobs and skills helps develop human capital, and this is key to ending extreme poverty and creating more inclusive societies (Dikeogu-Okoroigwe, Akunya & Nwizu, 2024).

Labor investment efficiency refers to the degree of matching between the actual amount of labor employed by a firm and the optimal amount required for production and operation (Jingze, Yitong & Wen, 2023). Labor is a crucial factor in high-quality economic development, as it helps enterprises break through the law of diminishing marginal returns and promotes sustained economic growth. The improvement of labor investment efficiency enables enterprises to have higher quality development, which means the optimization of human capital structure, improvement of enterprise productivity, and enhancement of enterprise management efficiency (Jingze, Yitong & Wen, 2023).

Unlike physical investments, almost every firm is involved in some form of labor investment (Habib, A., Ranasinghe & Liu, 2024). Labor, as an important factor of production, is crucial for a firm's competitiveness and profitability success, and prior studies document that efficient labor investment strengthens productivity, revenue generation and competitive advantage (Jung et al. 2014). Along the same view, inefficient labor investment in the form of over- or under-hiring is considered as non-value-maximizing activity which can adversely affect a firm's productivity and earnings (Lecuona & Reitzig, 2014) and thus is costly to the firm. Labor cost is not solely a variable cost but also involves adjustment costs such as costs associated with training and hiring activities (Hamermesh & Pfann, 1996), which may potentially influence a firm's ability to hire and fire efficiently. For example, over-hiring (or under-firing) elevates the payroll expenses and other related costs, which adversely affects a firm's net earnings when the increase in labor does not match with a corresponding increase in production. Supporting this view, Sirmon and Hitt (2009) show, with a sample of banks, that firm performance suffers when managers' investment decisions deviate from the norms of competitors for both human and physical capital. Vanacker et al. (2017) show that excess labor, which is usually viewed as more difficult to deploy, hampers firm performance, particularly when firms are operating in countries with stronger labor protection laws.

Extensive studies recognize that market imperfections flowing from information asymmetry can affect firms' labor investment decisions, leading to inefficiency in the form of over- or under-investment. Moral hazard, one form of primary imperfection, induces executives to engage in self-serving activities to prioritize their own self-interest (Jensen & Meckling, 1976). Following the agency theory, over-investment in labor (i.e., over-hiring) occurs when managers do this as a way of 'building empire' to gain greater organizational power and prestige (Stein, 2003). Considering that escalating the number of employees is easier than investing in physical assets, executives would rather over-hire employees for their empire-building to gain more security, power and status (Williamson, 1963), or under-fire excessive employees to maintain the private benefits of enjoyable employee relations (Atanassov & Kim, 2009). Under-investment in labor (i.e., under-hiring) occurs if managers are effort-averse and turn down profitable investment opportunities to pursue the 'quiet life' (Bertrand & Mullainathan, 2003). Many studies support the agency view which appears to dominate the literature. Jung et al. (2014) show that high-quality financial reporting lowers agency conflicts which, in turn, reduce inefficient labor investment. Ben-Nasr and Alshwer (2016) find that firms having higher stock price informativeness is associated with better monitoring of managers, leading to more efficient investment in labor. Khedmati et al. (2020) document that monitoring becomes ineffective when there exist CEO-director ties which exacerbate inefficient labor investment. Ghaly et al. (2020) show supportive evidence that inefficient labor investment reduces in the presence of institutional investors with longer investment horizons. Similarly, Sualihu et al. (2021) document that restrictive stock options reduce agency conflicts which, in turn, mitigate inefficient labor investment.

Financial reporting quality and labour investment efficiency

Investor attention and labor investment efficiency are two important factors that impact the performance and growth of firms (Jingze, Yitong & Wen, 2023). Investor attention refers to the attention behavior of investors generated by a specific time exposure. This concept has received increased attention in the field of finance in recent years, as it has been found to significantly impact investor decision-making and portfolio management. Veldkamp (2010) has examined the effect of investor attention constraints on portfolios, and found that limited ability to pay attention can lead investors to seek more information in the market.

Biddle, Gilles and Verdi (2019) posted that the association between financial reporting quality and investment efficiency relates to a reduction of information asymmetry between firms and external suppliers of capital. For example, higher financial reporting quality could allow constrained firms to attract capital by making their positive net present value (NPV) projects more visible to investors and by reducing adverse selection in the issuance of securities. Alternatively, higher financial reporting quality could curb managerial incentives to engage in value destroying activities such as empire building in firms with ample capital. This could be achieved, for example, if higher financial reporting facilitates writing better contracts that prevent inefficient investment and/or increases investors' ability to monitor managerial investment decisions (Biddle, Gilles & Verdi, 2019).

Jensen (1986) argues that the market for corporate control can serve as a monitoring mechanism that mitigates over-investment. Consistent with this prediction, Gompers, Ishii and Metrick (2003) show that firms with stronger shareholder rights have higher firm value, lower capital expenditures, and make fewer corporate acquisitions.

The financial theory expounds that investment in inefficient labour may occur due to market imperfections (Jensen and Meckling, 1976), which lead to information asymmetry between mangers and capital suppliers. Asymmetric information has two forms. First, adverse selection can arise when potential shareholders perceive that existing management have more access to information. Hence, managers would use this informational advantage to pursue personal goals or recompense existing shareholders. Therefore, potential shareholders feel reluctant to invest (Myers and Majluf, 1984; Walker, 2013). Second, moral hazard is a problem that can develop when shareholders are not able to check the actions of management, as to whether managers are putting money in a safe basket or investing in risky projects (Myers and Majluf, 1984; Walker, 2013).

The resource-based view of the firm posits that it is access to the unique resources that allows companies to get a competitive advantage and translate it into performance. Several scholars identified the unique key resources in the Big 4 accounting firms (i.e. organizational culture, professional development opportunities, auditor risk assessment expertise) which enable them to perform high-quality audit (Kinney et al., 2004; Christensen et al., 2016). In addition, the strong reputation of the Big 4 firms urges them to conduct audit with high integrity and, hence, acts as an

efficient monitoring tool (DeAngelo, 1981; Astami et al., 2017). Further, their large customer base allows the Big 4 to keep audit independent, which allows them to be less dependent on the client fees. Therefore, the Big 4 accounting firms provide better accounting quality when compared to their non-Big 4 competitors (Hung Chan and Wu, 2011; Ball et al., 2012). Earlier studies show that private firms have lower financial reporting quality presumably because of lower market demand for public information (Nerantzidis, Koutoupis, Drogalas, Vadasi & Mitskinis, 2023).

Empirical Reviews

Khoo and Cheung (2025) examine confidence, an important type of cognitive bias, at the subordinate executive level and provide new insights to the literature on labor investment efficiency. Using a sample of US firms from 1999 to 2020, we find that firms having highly confident subordinate executives exacerbates inefficient labor investment, which is consistent with the view that highly confident subordinate executives influencing risk-taking decisions to their advantage(s), which distorts labor investment efficiency. This detrimental impact on labor investment efficiency mainly manifests in firms with weaker external governance. Our findings are robust to alternative explanations, alternative proxies for both subordinate executives' traits and labor investment efficiency, additional control variables (including CEO traits and bias), and various approaches to addressing endogeneity issues.

Khan, Irfan and Naveed (2024) examined the link between financial reporting quality and investment efficiency in publicly listed firms in frontier markets, taking into account country-level investor protection. By comparing real and accrual earnings management, this paper demonstrates the context-dependent nature of the impact of financial reporting quality.. Accounting data from 1998 to 2020 are collected for all listed firms in six frontier market countries across 21 industries. Fixed-effect regression analysis is used to test causal relationships; several robustness checks are performed; and two-stage least squares is used to address endogeneity concerns. Higher financial reporting quality improves investment efficiency in frontier markets. Furthermore, the positive effect is amplified when country-level investor protection in frontier markets is strong.

Yuan, Yu and Yin (2024) examined the impact of corporate social responsibility (CSR) on labor investment efficiency utilizing a sample of China's listed companies. The empirical results demonstrate that CSR improves labor investment efficiency, and the effect is significant in terms of both overinvestment and underinvestment. Findings from cross-sectional tests indicate that CSR has a more significant effect on labor investment efficiency in non-state-owned firms and firms with more financing constraints or higher labor adjustment costs. The conclusion is robust after utilizing a 2SLS regression, replacing indicators for labor investment efficiency and accounting for the impact of non-labor investment. In general, the results support stakeholder theory and confirm that CSR can enhance external monitoring and improve firms' investment behavior.

Biddle, Gilles, and Verdi (2019) provided evidence of both in documenting a conditional negative (positive) association between financial reporting quality and investment for firms operating in settings more prone to over-investment (under- investment). Firms with higher financial reporting quality also are found to deviate less from predicted investment levels and show less sensitivity to

macroeconomic conditions. These results suggest that one mechanism linking reporting quality and investment efficiency is a reduction of frictions such as moral hazard and adverse selection that hamper efficient investment.

METHODOLOGY

This study adopts ex-post facto design as it involves the use of time series data to determine the economic relationship between two or more variables and such data have already been documented thus cannot be manipulated. The data sourced for this study is mainly secondary source. The data used for this study were collected and extracted from the summaries of financial reports of selected companies. The sample size of this study is five selected quoted companies which are Cadbury Nigeria Plc, Dangote Plc, Nigerian Breweries Plc and Guinness Nigeria Plc. The time frame covers from 2011 to 2023 which is 13 years. This study adopted Classical Linear Regression Model (CLRM) technique to analyze data for this work.

The model is in the stated hypotheses are expressed in the following functions:

$Y = f(X)$

Where, Y= Dependent variable

X= Independent variable

$LBI = f(TIME)$……..….. i

Where;

LBI = labour investment

TIME = Timeliness

The relationship is expressed in the equation as:

$LBI_t = a + b_2\ TIME_t + U_t$……...… ……ii

$LBI = f(TAS)$…….…….…….. iii

Where;

LBI = labour investment

TAS= Total assets

The relationship is expressed in equation form as:

$LBI_t = a + b_1\ TAS_t + U_t$…… ……..…iv

$LBI = f(SHF)$……..……..…..…….v

Where;

LBI = labour investment

SHF= Shareholders' fund

The relationship is expressed in equation form as:

$LBI_t = a + b_1\ SHF_t + U_t$…… ……..……...vi

Using the multiple regression analysis, the model can be restated as

$LBI = f(TIME, TAS, SHF)$……..……vii

$Y = F(X)$

Where y= dependent variable and x= independent variable

Therefore: LABOURINV= labour investment (y)

TIME = Timeliness (represented by date of presentation of financial report)
TAS= Total assets value annually
SHF= Total value of shareholders fund
The relationship expressed in equation form is

$LABOURINV_t = a + b_1 TIME_t + b_2 TAS_t + b_3 SHF_t + U_t$…viii

Where; $b_1, b_2, b_3 >$

Data analysis

Table 4.1: Descriptive statistics

Date: 03/03/25
Time: 16:37
Sample: 2011 2023

	LABOURINV	TIME	SHF	TAS
Mean	17777275	2.269231	36538291	1.01E+08
Median	13390654	2.000000	187870.2	165099.6
Maximum	1.22E+08	4.000000	1.81E+08	7.97E+08
Minimum	28675.00	1.000000	6513.678	27528.04
Std. Dev.	22602450	0.952095	66428039	1.93E+08
Skewness	2.469871	-0.008145	1.401672	1.809321
Kurtosis	10.84584	1.897805	3.150059	5.444833
Jarque-Bera	186.2428	2.632716	17.07606	41.32219
Probability	0.000000	0.268110	0.000196	0.000000
Sum	9.24E+08	118.0000	1.90E+09	5.28E+09
Sum Sq. Dev.	2.61E+16	46.23077	2.25E+17	1.91E+18
Observations	52	52	52	52

Source: Author's computation

From the table above, there is significant variation in the trends over the period of consideration. This is shown by the large difference between the minimum and maximum values of the series. With respect to the statistical distribution of the series, all the variables are positively skewed except TIMELINESS which entails a positive asymmetry of the distribution of the series around the mean. The kurtosis measures the peakedness or flatness of the distribution of the series. If the kurtosis is above 3, the distribution is peaked or leptokurtic relative to normal but if the kurtosis is less than 3, the distribution is flat or platykurtic relative to normal. From the table above, the values for labour investment, shareholders' fund and total assets are greater than 3, therefore they are peaked or leptokurtic. The value for timeliness is less than 3 which means that the series are flat or platykurtic.

Jarque-Bera is a statistic that tests for normality in the distribution of the series. From the results, labour investment, shareholders' fund and total assets have p-values less than 0.05 which violates

the normality assumption and therefore are not normally distributed while timeliness is normally distributed as its p-value is greater than 0.05.

Table 4.2: Correlation matrix

	LABOURINV	TIME	SHF	TAS
LABOURINV	1.000000	-0.115851	0.264532	0.575180
TIME	-0.115851	1.000000	-0.023158	-0.125835
SHF	0.264532	-0.023158	1.000000	0.874300
TAS	0.575180	-0.125835	0.874300	1.000000

Source: Author's computation

The result on table 4.2 shows the correlation matrix for the independent variables. TIME has negative correlation with SHF and TAS which implies that the longer the time taken to present the audit report, the likelihood of lower investment from investors and shareholders and the lower the asset value. This suggests that companies must make it a responsibility to present their audit reports early. SHF and TAS showed a positive correlation which implies that the higher the shareholders capital, the higher the assets of the companies. It also suggests that the higher the assets, the more investors will invest in such company as it shows a sign of strength and stability.

Table 4.3: Granger causality test

Pairwise Granger Causality Tests
Date: 03/03/25 Time: 17:30
Sample: 2011 2023
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
TIME does not Granger Cause LABOURINV	43	0.33871	0.7148
LABOURINV does not Granger Cause TIME		3.89232	0.0290
SHF does not Granger Cause LABOURINV	43	2.08846	0.1379
LABOURINV does not Granger Cause SHF		35.2316	2.E-09
TAS does not Granger Cause LABOURINV	43	3.49172	0.0405
LABOURINV does not Granger Cause TAS		2.65936	0.0830

Source: Author's computation

The granger causality which is used to test the direction of influence between the dependent and independent variable shows that LABOURINV has a prob value of 0.0290 with TIME which implies that efficient investment in labour influences the timeliness of audit report presentation. LABOURINV has a prob value of 2.E-09 which is lower than 0.05 level of significance with SHF which implies that efficient investment in labour influences the shareholders' fund which implies that an efficient workforce will encourage investors who will see the company management and staff as able to maximize their profits.

TAS has a prob value of 0.0405 which is lower than 0.05 level of significance with LABOURINV which implies that the assets of the companies influence their investment decision on labour. That is, management of companies will invest in labor or human capital to management their assets effectively .

Table 4.4: Result of OLS analysis

Dependent Variable: LABOURINV
Method: Panel Least Squares
Date: 03/03/25 Time: 17:26
Sample: 2011 2023
Periods included: 13
Cross-sections included: 5
Total panel (unbalanced) observations: 52

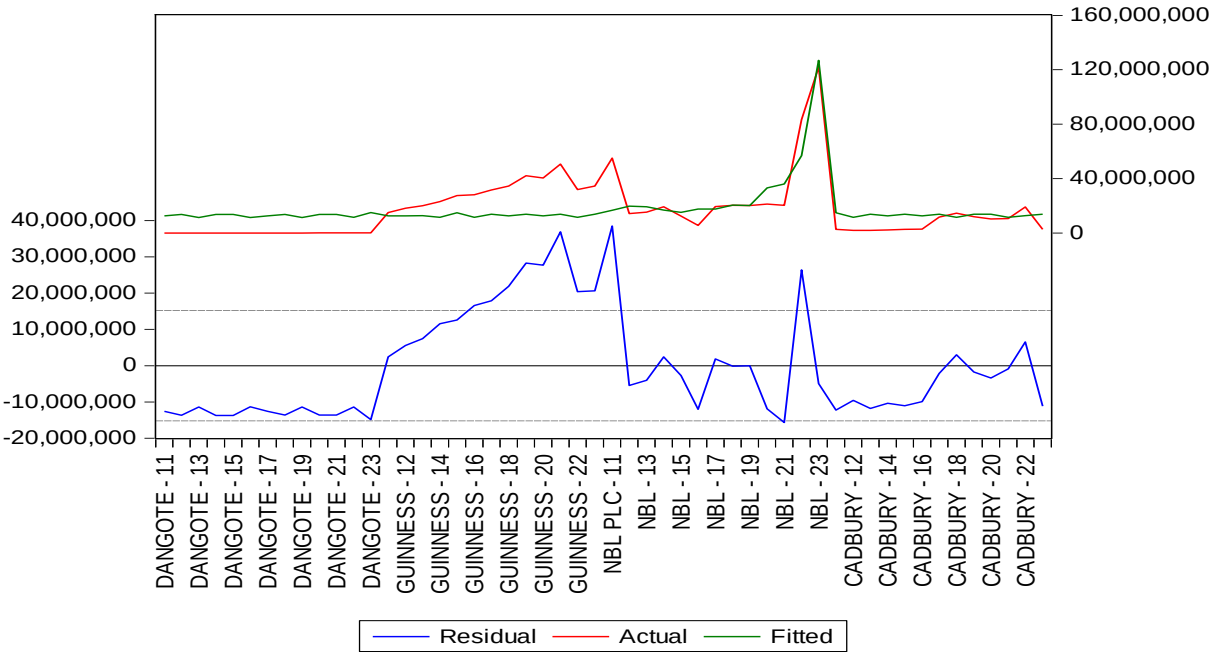
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10486240	5800615.	1.807781	0.0769
TIME	1107007.	2291885.	0.483012	0.6313
SHF	-0.350072	0.067138	-5.214220	0.0000
TAS	0.173143	0.023254	7.445891	0.0000

R-squared	0.574030	Mean dependent var	17777275
Adjusted R-squared	0.547407	S.D. dependent var	22602450
S.E. of regression	15205807	Akaike info criterion	35.98606
Sum squared resid	1.11E+16	Schwarz criterion	36.13615
Log likelihood	-931.6375	Hannan-Quinn criter.	36.04360
F-statistic	21.56134	Durbin-Watson stat	1.618843
Prob(F-statistic)	0.000000		

Source: Author's computation

From empirical results of the panel regression in table 4.4 shows a model estimated as LABOURINV = 10486239.6538 + 1107007.04718*TIME - 0.350072223576*SHF + 0.173143444083*TAS.

The coefficient of determination (R^2) shows a value of 0.574030 which is equivalent to 57.4% thus implying that the variables are fairly fitted on the regression line. The adjusted (R^{-2}) reassured value of 0.5474 shows that about 54.74% of the variations in the labour investment is explained by the presence of shareholders' fund, total assets and timeliness in the model. The variables not captured in the model caused the variation of 45.26%.



The F-test ratio of 21.56134 with P-value of (0.0000) shows that the overall regression is significant at 5%. The Durbin Watson statistic value 1.618843 appropriates to 2 showing the absence of positive autocorrelation.

Hypotheses testing

Test of hypothesis one

H_{o1}: Timeliness of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria

H_{i1}: Timeliness of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria

From the regression results in table 4.4, the regression coefficient of Timeliness is positive (1107007.) which implies that the timely the financial report, the higher the labour investment efficiency. The t-statistics shows a prob value of 0.6313 which is greater than 0.05 level of significance), which implies we accept the null hypothesis that timeliness of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria.

Test of hypothesis two

H_{o2}: Completeness of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria.

H_{i2}: Completeness of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria.

From table 4.4, we observed that the coefficient (-0.350072) of completeness of financial report proxied by shareholders' fund is negatively. This implies that the higher the shareholders fund, the lower the investment in labour. The t-statistics shows a prob value of 0.0000 which is less than 0.05 level of significance therefore the null hypothesis is rejected while the alternative is accepted that completeness of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria.

Test of hypothesis three

H_{o3}: Transparency of financial report has no significant impact on labour investment of selected manufacturing firms in Nigeria

H_{i3}: Transparency of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria

Table 4.4 shows that the coefficient of transparency of financial report proxied by total value of assets is 0.173143 which implies a positive relationship. This indicates that the higher the assets value, the higher the investment in labour. The t-statistics shows a prob value of 0.0000 which is less than 0.05 level of significance therefore the null hypothesis is rejected while the alternative is accepted that completeness of financial report has significant impact on labour investment of selected manufacturing firms in Nigeria.

DISCUSSION OF FINDINGS

The analysis revealed a negative and insignificant relationship between timeliness of financial report and labour investment in the selected manufacturing firms in Nigeria. This result implies that timeliness of financial report has insignificant and negative impact on labour investment. This result is consistent with the findings of Biddle, Gilles and Verdi (2019) that investment-cash flow sensitivity can reflect financing constraints. This result is contrary to the findings of Wajeetongratana et al., (2019); Hung et al., (2020) which though noted that a high financial report quality is associated with increased in labour investment efficiency.

The results also noted a positive and significant relationship between completeness of financial report and labour investment of selected manufacturing firms in Nigeria. This result suggests that increase in completeness of financial report (shareholders fund) results in a increase in labour investment since the shareholders have all the information needed. This result is consistent with the argument of Gompers, Ishii and Metrick (2003) that firms with stronger shareholder rights have higher firm value, lower capital expenditures, and make fewer corporate acquisitions.

Findings also revealed that transparency of financial report (total asset value) has positive and significant relationship with labour investment. This suggests that the higher the asset value, the more the companies are willing to invest in human capital for better asset management. By increasing the marginal output of capital, a higher human capital stock will lead to more physical

capital accumulation. In the era of knowledge economy, labor is an important core asset for a firm to obtain competitive advantages. The findings support the study of Khan, Irfan and Naveed (2024) and Yuan, Yu and Yin (2024) that higher financial reporting quality improves investment efficiency in frontier markets

Conclusion from the study

Labour is an indispensable factor of productivity, and labour cost (i.e., labour investment, salary and wages) usually accounts for nearly two-thirds of firms' economic value added. Labour is productive only if it is efficient and effective. In recent years, the need for financial reporting quality has given attention to every contents of the company' financial statement part of which now include labour investment. It was found that elements of financial reporting quality such as completeness and transparency of financial reports exhibit a positive effect on labour investment activities of the companies under study. However, the timeliness of their report is not a significant determinant of labour investment efficiency. From the foregoing findings, it can be concluded that financial reporting quality positively impacts on labour investment efficiency.

Recommendations

Based on the findings, the following recommendations have been put forward:

1. Regulators and stakeholders could improve the firms' financial reporting quality and labour investment efficiency by strengthening the monitoring role of the top management team and ensuring timeliness in their financial reports.
2. Considering the important role of shareholders funds, executives should ensure shaping the firms' future by giving more attention to labour recruitment and retention. This can be achieved through effective advertisement of the job position, selecting the best candidates and proving competitive incentives that will encourage their stay and ensure retention of the best hands.
3. There is need to ensure complete disclosure of the firms' value and position especially its assets while also ensure training of its employees for effective use of its assets especially in the area of technology.

Contribution to knowledge

This study has shown that good financial reporting quality performance can improve labor investment efficiency by inhibiting overinvestment and underinvestment simultaneously. High-quality information disclosure and external monitoring will improve labor investment efficiency by reducing labor overinvestment and underinvestment simultaneously.

Suggestions for further studies

There is need to extend this research to other manufacturing companies in Nigeria as this will enable more insight on how the companies in Nigeria take labour investment efficiency serious.

Conflict of interest

The authors express no conflict of interest.

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