Impact of Human Resource Accounting on the Quality of Financial Reports of Non-Financial Companies in Nigeria: Possibilities and Challenges

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Abstract

Despite the advances in human resource accounting (HRA), companies in Nigeria are far behind in adopting this new concept in accounting. Generally, adopting HRA by companies in Nigeria remains voluntary due to diverse factors. This research investigated the effects of voluntary HRA disclosure on the FRQ of non-financial companies in Nigeria using data from the 2019 financial reports of 86 firms and 46 professional accountants. The research also studied the challenges of HRA in Nigeria. The study applied the Syed HRA disclosure index to measure HRA disclosure. The study assessed the level of FRQ by operationalising the qualitative characteristics of FR. The study used regression analysis to investigate the impact of HRAD on FRQ. The Kruskal-Wallis test was applied to ascertain the differences among the three groups of accountants. The results of the regression analysis show that HRAD contributes toward improving FRQ. Additionally, the primary data shows that accountants agree that HRAD improves FRQ. The results also reveal that the main reasons for not recognising the value of the investment in HR are the absence of acceptable valuation methods, fear of competitors, and sensitivity of HRV. The findings also demonstrate that the significant issue with HRA in Nigeria is not a lack of a generally accepted valuation model. The results suggest that the lack of a robust framework for auditing HRA information is the main problem of HRA in Nigeria. Among other things, this research recommends that listed non-financial firms in Nigeria should adopt HRA. The study also calls for the development and issuance of accounting and auditing standards. The research also calls for future research to study the association between HRAD and FRQ using longitudinal study.

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List of Abbreviations

ANAN	Association of National Accountants of Nigeria
ANOVA	Analysis of Variances
CAMA	Companies and Allied Matters Act
ICAN	Institute of Chartered Accountants of Nigeria
FASB	Financial Accounting Standard Board
FR	Financial Reporting, Financial Report, Financial Reports
FRC	Financial Reporting Council
FRCN	Financial Reporting Council of Nigeria
FRQ	Financial Reporting Quality, Financial-reporting quality
FRQI	Financial Reporting Quality Index
HCD	Human Capital Disclosure
HR	Human Resource, Human Resources
HRA	Human Resource Accounting
HRAD	Human Resource Accounting Disclosure
HRADI	Human Resource Accounting Disclosure Index
HRV	Human Resource Value, HR value
IAS	International Accounting Standards
IASC	International Accounting Standards Committee
IFRS	International Financial Reporting Standards
NASB	Nigerian Accounting Standards Board
NSE	Nigerian Stock Exchange
QCFR	Qualitative Characteristics of Financial-Reporting, Qualitative Characteristics of FR
RBV	Resource-Based View Theory
SAS	Statement of Accounting Standards
SFP	Statement of Financial Position
UREC	Unicaf University Research Ethics Committee

Chapter 1: Introduction

1.0 Background to the Study

To ensure operational efficiency, firms acquire various resources (Plotnikov & Plotnikova, 2020; Arkan, 2016; Enofe et al., 2013). The nature and proportion of the combination of such resources depend on its operational peculiarities and the industry in which it operates (Plotnikov & Plotnikova, 2020; Wade & Hulland, 2004). Notwithstanding these peculiarities, all firms need three broad classes of resources to function efficiently (Sisodia et al., 2021; Ojokuku & Oladejo, 2017). Based on the three main classifications, a firm's resources are physical, financial, and human (Atul & Preeti, 2019; Chatterjee & Chatterjee, 2018; Monday, 2017; Moghadam et al., 2017; Ojokuku & Oladejo, 2017). Inanimate resources such as materials, land, plants, machinery, tools, and financial assets are physical resources (Moghadam et al., 2017; Omole et al., 2017). Financial resources include investments, cash, receivables, goodwill, patents, and copyright (Moghadam et al., 2017). A firm's human resources (HR) are the animate resources at its disposal (Atul & Preeti, 2019; Chatterjee & Chatterjee, 2018; Moghadam et al., 2017). A critical look at the three classes of resources shows that human resources serve as the resources that bring together all the physical resources and the financial resources into life by manipulating them in the required proportion to achieve the organisational goals of the firm (Baghadam et al., 2020; Asein et al., 2019; Moghadam et al., 2017; Omole et al., 2017).

Human resources are the personnel or workers of an entity. Human resources are collectively called human capital (HC) and are regarded as the most crucial resources of any firm (Monday, 2017; Micah et al., 2012; Schneider & Samkin, 2007). Human resources are crucial in determining the fate of any organisation (Baghadam et al., 2020; Huang et al., & Haniffa, 2013). The assets that help a company to achieve a competitive advantage are the unique assets.

A human asset is the most specific asset not subject to duplication (Ijeoma, 2015; BarconsVilardell et al., 1999).

The value of HR is a critical factor in many crucial business decisions (Sisodia et al., 2021; Oko, 2018). How a firm utilises its HR directly affects the ability of the firm to realise its value (Chatterjee & Chatterjee, 2018; Oluwatoyin, 2014). Human resources are the intangible factors that bring life to firms and coordinate all other resources, thereby creating value for the firm (Sisodia et al., 2021; Janshanlo et al., 2019; Oko, 2018). There is a general belief among businesses and analysts that the survival of any firm is dependent on the quality and characteristics of its HR (Oladele et al., 2018; Ekundayo & Odhigu, 2016; Wyatt & Frick, 2010). Adejuwon et al. (2020) posit that “the personnel who handle the physical assets of the organisation keep the organisation alive” (p. 304). Kashive (2013) argues that intangible assets, of which HR is part, are generally considered the “major drivers of national as well as corporate success” (p. 117). In recognition of the importance of human resources, firms spend an enormous amount of money on the recruitment, placement, training, and retention of this crucial factor, which determines the success of businesses (Oluwatoyin, 2014; Ijeoma & Arounu, 2013).

Economists have acknowledged the role of human resources as an essential component in production and have devised different methods of measuring and valuing human resources. (Bello & Egbe, 2021; Odunayo & Festus, 2020; Samuelson & Marks, 2012). Although accountants have for over eighty years acknowledged the position of human assets as a crucial element in the determination of the success of firms, accountants are yet to devise a generally accepted valuation method for human resources and are yet to recognise the money value of human resources in the financial reports (Arkan, 2016; Kashive, 2013; Syed, 2009).

The importance of intellectual capital has become more pronounced as a result of the transformation of world economies from industrial-based (manufacturing) economies to information-based (knowledge) economies (Monday, 2017; Schneider & Samkin, 2007). The primary distinction between the two types of economies is the type of more relevant assets. In a manufacturing-based economy, machinery is the most valuable asset, while in a knowledgebased economy, as an asset, intellectual capital has the highest value in terms of importance

(Schneider & Samkin, 2007). In the business environment, human resources are a value creator. Furthermore, human resources help a firm achieve a competitive advantage (Huang et al., & Haniffa, 2013). What differentiates a successful firm from a less successful one is the quality of its human assets (Petkov, 2010). Due to the importance of human assets, almost threequarters of the cost incurred in production relates to human resources (Barcons-Vilardell et al., 1999). The quality of intellectual assets is a significant factor that influences the value of shares and is a principal factor considered in investment decisions (Okpala & Chidi, 2010).

Additionally, Micah et al. (2012) reported a positive relationship between HR accounting (HRA) and return on equity.

Accounting is an information system that serves as an avenue for communicating firms' financial success and stability (Odunayo & Festus, 2020; Verma & Aggarwal, 2020). Through financial reporting, accounting provides information to support various decisions (Odunayo & Festus, 2020). The main target of financial accounting and reporting is to give pertinent information to the stakeholders and other users of accounting information in a standardised manner (Koppeschaar et al., 2019; Elliott & Elliott, 2017; Hossain, 2015; Beest et al., 2009). Accounting information is supposed to be relevant and adequate to help stakeholders and other numerous categories of users of accounting information to make well-informed judgements

(Shreelatha et al., 2018; Hossain, 2015; Abdullahi et al., 2012; Okpala & Chidi, 2010; Elias, 1972). The adequacy of the financial reports may not be sufficient where the reports neglect the value of some crucial elements such as human resources (Mili & Hashim, 2020). The failure of the financial reports to sufficiently reports the value and the contribution of human resources to a firm is a cause for concern despite the reports of the auditor certifying the reports as depicting the “true and fair position of business” at a given date (Hossain, 2015, p.51).

As it is today, financial reports deprive stakeholders of vital clues about human resources because of the inability of current accounting practice to incorporate specific information about human resources into the framework of financial reporting (FR) (Sisodia et al., 2021; Mili & Hashim, 2020; Asein et al., 2019; Ezeagba, 2014; Syed, 2009). Many studies in developing countries like Bangladesh, the Philippines, South Africa, and Nigeria revealed that human resources disclosure in financial statements is voluntary and at a low stage (Moloi & Adelowotan, 2019; Oladele et al., 2018; Ibarra & Cosico, 2016; Syed, 2009). The reason for the inability of financial reports to properly incorporate human resources information is not far from the conservatism principle of traditional accounting (Fulmer & Ployhart, 2014).

Current accounting standards and traditional accounting treatment for human resource-related costs are insufficient to meet the demand for reporting human assets in financial statements (Bonsu et al., 2019; Oladele et al., 2018; Asika et al., 2017; Omole et al., 2017). Traditional accounting considers the cost incurred on human resources an expenditure, chargeable against the current period's income (Okopu, 2021; Ezeagba, 2014; Micah et al., 2012). This treatment negates the matching concept of accounting (Monday, 2017; Schneider & Samkin, 2007).

The above developments (the inability of traditional accounting to treat HR costs adequately) led to the emergence of a new accounting method now known as HR accounting (Adejuwon et al., 2020; Arkan, 2016; Okpala & Chidi, 2010). HR accounting seeks to determine the monetary value of human assets and report it together with other assets in the financial reports (Micah et al., 2012; Okpala & Chidi, 2010). Under HR accounting, investments in human assets are treated as assets, not as expenses (Ali et al., 2020; Stanko et al., 2014; Kashive, 2013). Okpala and Chidi (2010) argue that a suitable accounting system for intellectual assets will remarkably assist in decision-making by shareholders, management, and other stakeholders. HR accounting has the potential to enhance financial-reporting quality (FRQ) significantly by improving the quality of decision-making.

HR accounting considers the importance of including HR value in the financial reports (Opoku, 2021; Okpala & Chidi, 2010). Advocates of HR accounting believe that presenting HR value in the published financial reports of firms will make the reports more meaningful and valuable to the users of the reports (Asika et al., 2017; Ezeagba, 2014). Advocates of HR accounting also believe that there is a need for the regulatory authorities to approve and mandate firms to report the values of their human resources in their published financial statements (Bonsu et al., 2019; Oladele et al., 2018; Ezeagba, 2014).

Advocates of HR accounting based their calls for the inclusion of the value of HC in annual reports on the recognition of human resources as a critical factor in decision making and as a value creator (Odunayo & Festus, 2020; Monday, 2017; Samuelson & Marks, 2012; Schneider & Samkin, 2007). Likert and Williams (1971) are among the early researchers who tried to develop a model for valuing human resources, while Professor Eric Flamholz is the father of HR accounting (Mayor, 2008). These researchers made various efforts to answer the lingering questions of how reporting entities can attribute financial value to their workforce using accounting logic and how they can disclose such information in their financial reports (Micah et al., 2012; Okpala & Chidi, 2010).

The need for uniformity in FR culminated in the development of the “International Financial Reporting Standards” (IFRS) (Bragg, 2018; Osasere & Ilaboya, 2018, p. 30; Elliott & Elliott, 2017). Nigeria adopted the IFRS in 2012 to ensure consistent accounting practices with other countries (Habib et al., 2019; Jayeoba & Ajibade, 2016). IFRS demands more disclosure of intangible assets compared to the then Nigerian Statement of Accounting Standards (SAS). IFRS requires complete disclosure (Oladele et al., 2018; Jayeoba & Ajibade, 2016). The adoption of IFRS in Nigeria is supposed to have opened the doors for more HR accounting disclosure in the published annual reports of reporting entities in Nigeria. However, years after adopting IFRS, reporting entities in Nigeria and other countries lag in voluntary HR accounting disclosure (Opoku, 2021; Bonsu et al., 2019; Akintoye et al., 2016). The lag in disclosing HR accounting information by reporting entities in Nigeria can be due to the country's infancy in HR accounting (Oladele et al., 2018).

Oladele et al. (2018) noted that published research papers on HR accounting are scarce in Nigeria. A review of the available studies on the topic reveals that despite the development witnessed in HR accounting, companies in Nigeria and many other developing countries are yet to adopt HR accounting fully (Bowrin, 2018; Sarkar et al., 2016; Onyekwelu, Osisioma & Ugwuanyi, 2015; Huang et al., 2013; Okpala & Chidi, 2010; Schneider & Samkin, 2007). Such companies continue to use traditional accounting methods. The few that adopt some aspects of HR accounting do so voluntarily (Monday, 2017; Sarkar et al., 2016; Ibarra & Cosico, 2016; Schneider & Samkin, 2007). Another point to note is that the existing literature concentrates on discovering a feasible solution to HR valuation based on the cost incurred or to be incurred by a firm, ignoring the value (worth) that an employee brings with him into the organisation in the form of formal training and work experience. Monday (2017) and Arkan (2016) argue that there is an immediate need to develop an accounting system for human assets through robust research that will be acceptable to the stakeholders, such as professional accountants, managers, investors, and other decision-makers.

Financial reporting is an indispensable tool through which accounting conveys information about the activities of firms to stakeholders to support their decisions (Odunayo & Festus, 2020). The contents of the financial reports can affect the stability of the capital market by influencing share prices (Nwaobia et al., 2016; Elliot & Elliot, 2017). Therefore, the quality of the financial statements' content determines the report's general quality. To influence the quality of an audited account, the contents of the audited report should have specific qualitative attributes (the International Accounting Standards Board, IASB, 2018). The qualitative features of FR of “faithful representation, relevance, understandability, timeliness, comparability, and verifiability” are the necessary elements that determine the decision usefulness of a disclosure item in the financial report (Kaawaase et al., 2021, p. 354).

Given the low level of awareness and adoption of HR accounting and HR accounting disclosure in Nigeria, coupled with the absence of standardisation, it is pertinent to examine the influence of HR accounting disclosure on the quality of FR of reporting entities. Therefore, this research studies how HR accounting disclosure affects the FR quality of non-financial companies; the problems and challenges of HR accounting in Nigeria; and possible solutions to the significant problems and challenges. One of the main targets of the research is to develop a robust valuation model for HR, accounting treatment, and reporting framework. This study collected the necessary data for statistical analysis through surveys of professional accountants and published accounts of non-financial companies listed by the Nigerian Stock Exchange (NSE). Financial reporting is an indispensable tool through which accounting conveys information about the activities of firms to stakeholders to support their decisions (Odunayo & Festus, 2020). The contents of the financial reports can affect the stability of the capital market by influencing share prices (Nwaobia et al., 2016; Elliot & Elliot, 2017). Therefore, the quality of the financial statements' content determines the report's general quality. To influence the quality of an audited account, the contents of the audited report should have specific qualitative attributes (the International Accounting Standards Board, IASB, 2018). The qualitative features of FR of “faithful representation, relevance, understandability, timeliness, comparability, and verifiability” are the necessary elements that determine the decision usefulness of a disclosure item in the financial report (Kaawaase et al., 2021, p. 354).

At the end of this research, the researcher made recommendations for future research and application. This research proposed what this researcher termed the Dual Value Approach to HR Valuation and Reporting to improve the application of the concept of HR accounting. Under that approach, an employee will have two values: a nominal value and an actual value. Through this approach, an employer would be able to determine the monetary value of a potential employee.

1.2 Statement of the Problem

Stakeholders of every organisation need information that will help them know about the organisation's operations and decision-making (Hamzah et al., 2013). FR is an avenue through which reporting entities communicate with their diverse stakeholders. Oko (2018) posits that FR serves as a channel through which reporting entities send information to their stakeholders about the "operational performance" of the entities "in terms of profitability, efficiency, and responsibility as well as financial position" (p. 1704). IASB (2018) indicates that providing financial information to stakeholders for making informed decisions is the objective of FR. FR provides the necessary accounting information through a combination of many statements and notes to the statements, which give more details about the operations and performance of the reporting entity (Odunayo & Festus, 2020). Therefore, many stakeholders rely on FR information for making important decisions (Mahmoud, 2017).

FR provides all the stakeholders with all the accounting and financial information they need for decision-making. Kaawaase et al. (2021) argue that "for valid decisions, information in the financial reports ought to be faithfully represented, relevant, understandable, comparable, timely and verifiable" (p. 348). The need for financial information to fulfil these requirements led to the discussion about the quality of FR. FR quality is a prerequisite for making an efficient decision concerning investment and resource allocation (Kaawaase et al., 2021). Accounting disclosure is one of the means of improving FR quality. Studies have shown that disclosing HR accounting information influences share prices, investment, and other decisions. Therefore, stakeholders expect reporting entities to provide high-quality financial reports that disclose all the expected information. Improving FR quality will reduce information asymmetry (Irwandi & Pamungkas, 2020; Muttakin et al., 2020; Mahmoud, 2017). Reporting entities can improve their FR quality by improving their disclosure practice (Bello & Micah, 2021).

1.2.1 The problem

Unfortunately, the quality of FR in Nigeria and other developing nations is low (Muttakin et al., 2020; Mahmoud, 2017). The corporate failures experienced in many countries, including Nigeria, due to poor quality FR have drawn the attention of many stakeholders. Mahmoud (2017) observes that “improper, false and misleading financial reporting” is part of the reasons for corporate failures (p. 151). These corporate failures have made stakeholders question the FR quality of many reporting entities.

Researchers have identified accounting disclosure as a factor influencing FR quality significantly (Bello & Micah, 2021; Omoro, 2019). For instance, Fakoya and Lawal (2020) found that environmental accounting disclosure significantly affects the FR quality of shipping companies in Nigeria. Omoro (2019) found that voluntary disclosure influences the FR quality of commercial corporations in Kenya. Prior studies have identified poor disclosure practice as one of the reasons for the low FR quality (Bello & Micah, 2021). Therefore, improvement in the disclosure can result in improved FR quality.

Prior studies have shown that Nigeria and other developing countries lag in HR accounting disclosure (Alawi & Belfaqih, 2018; Jesuwunmi et al., 2017). The HR accounting adoption level in Nigeria is low. Oladele et al. (2018) observed that HR accounting is not well developed in Nigeria. Similarly, in a study of Nigerian firms, Ramat and Noah (2013) reported a low quality of intellectual capital disclosure. The trend in Nigeria is like that in some developing countries. For instance, Adelowotan (2019) reported a low level of HC disclosure among listed companies in South Africa. In a study about awareness of HR accounting among accounting students, Opoku (2021) found a limited degree of awareness among Ghanaians. Moloi and Bowrin (2018) found a “relatively low” level of HR disclosure in Caribbean countries and South Africa (p. 244). Ibarra and Cosico (2016) reported a low level of awareness and adoption of HR accounting in the Philippines. The deficiency in HR accounting disclosure in FR adds to the information asymmetry. Thus, Moloi and Adelowotan (2019) argue that “the implication of the noticeable low level of HCD [human capital disclosure] is that it limits the decisionusefulness of these reports” (p. 173).

Although firms gradually appreciate the need to make more HR disclosure in their financial reports, conventional accounting is lagging in accepting human resources into mainstream accounting and financial reporting (Bonsu et al., 2019; Jesuwunmi et al., 2017). Studies like Fulmer and Ployhart (2014) attributed this to the conservative nature of accounting. Other studies attribute the low level of HR accounting adoption to the lack of a valuation model for human resources and other problems associated with HR accounting. Ying-hong (2006) opined that human resources information could not conform to the fundamental qualitative characteristics of FR. As such, it does not positively affect its relevance and reliability. Petkov (2010) and Ying-hong (2006) argue that HR accounting information should only be disclosed in the notes to the accounts, implying that there is no need to assign a monetary value to human resources. The increasing empirical evidence that shows that HR accounting has a positive relationship with firm value and firm profitability and influences investment decisions challenge the position of Petkov (2010) and Ying-hong (2006) (Odunayo & Festus, 2020; Atul & Preeti, 2019; Dhirubhai, 2018).

Regulators have instituted several measures to improve FR quality in Nigeria. These include legislation and the adoption of IFRS (Osasere & Ilaboya, 2018; Mahmoud, 2017). Furthermore, researchers have conducted many studies on HR accounting to find solutions to its challenges and make the concept more suitable for adoption by reporting entities. Such studies include Bello and Micah (2021), Khan (2021), and Arkan (2016).

Despite the measures to improve the quality of FR in general and HR accounting in particular, the problem of low-quality FR and poor HR accounting disclosure persists. Akintoye et al. (2016) found that adopting IFRS has not significantly improved the HR accounting practices in Nigeria. As noted above, there is a low level of awareness and adoption of HR accounting in many developing countries like Nigeria, South Africa, Ghana, India, and the Philippines (Aggarwal, 2021; Opoku, 2021; Bowrin, 2018; Ibarra & Cosico, 2016).

The low level of HR accounting disclosure in Nigeria is evident in the literature. For instance, Adejuwon et al. (2020) revealed that the HR accounting disclosure is low at 16.7%. In another study, Onuoha et al. (2020) show that the quality of human capital disclosure of the banks in Nigeria ranges from 24.77% in 2012 to 25.00% in 2016. That is lower than relational capital, which moved from 27.65% to 31.27% within the same period.

Studies from other developing countries also reveal a low level of HR accounting disclosure. For instance, Aggarwal (2021) found that HR disclosure of Indian companies stood at 39.31%, which the researcher describes as low. Bowrin (2018) found that with an average of 33.7%, the HR disclosure in Caribbean and African countries is relatively low. In another study, Syed (2009) discovered that Bangladeshi companies disclose only 25% of their HR accounting information, which is also low.

The findings in the above paragraph indicate that despite the advancement in HR accounting, there is much to be done to develop a robust framework and standards and create more awareness among the stakeholders, which will lead to more adoption and improved disclosure practice (Monday, 2017; Arkan, 2016; Onyekwelu et al., 2015). As suggested by Arkan (2016), there is a need for further empirical studies in the field of HR accounting.

Although some studies have investigated the influence of HR accounting on some aspects of firms' activities, there is a paucity of research on the link between HR accounting and FR quality (Odunayo & Festus, 2020; Verma & Kirti, 2019; Oladele et al., 2018). Prior studies also argued that there is a paucity of studies on HR disclosure. One area worth investigating is the contribution of HR accounting disclosure to the FR quality of reporting entities (Hamza et al., 2013). Financial reports play an important role in investment and other managerial decisions, and human resources are essential in investment and other decisions (Mili & Hashim, 2020; Hamza, 2013). Including human resource information as part of the annual report agrees with the stakeholder theory, as Hamza et al. (2013) emphasised. Hamza et al. (2013) stated that the stakeholder theory "suggests that all stakeholders have a right to be provided with information on how organisational activities impact them even if they choose not to use it" (p. 107). In a recent investigation, Odunayo and Festus (2020) studied the linkage between HR accounting and the FR quality of Nigerian listed oil and gas firms.

1.2.2 The research gap

Odunayo and Festus (2020) is a recent study on the influence of HR accounting on FR quality in Nigeria. The study used an ex-post facto design to investigate how HR accounting influences the FR quality of twelve listed oil and gas firms in Nigeria. The study used "Account Conservatism (ACC), Earnings Smoothness (ES) and Earning Persistence (EP)" as the proxies for measuring FR quality. The study also used three proxies for HR accounting disclosure, namely: "Wages and Salaries (WAS), Pension and Retirement Benefits (PRB) and Number of Employees (NE)" (p. 201).

Researchers like Mahboub (2017) and Beest et al. (2009) argue that "account conservatism," "earnings smoothness," "earning persistence," "accrual quality," and the rest (some of which Odunayo and Festus (2020) used), are indirect proxies for measuring FR quality. The problem of the indirect measures of FR quality is that they rely heavily on financial data; they do not consider non-financial data (Omoro, 2019; Osasere & Ilaboya, 2018; Mahboub, 2017; Beest et al., 2009). However, Babatunde (2017) asserts that non-financial information affects FR quality. Moreover, Muttakin (2020) maintains that non-financial information is relevant in decision-making.

Another deficiency of the indirect measures of FR quality noted inconsistencies in the outcome of studies (Beest et al., 2009). Highlighting the deficiencies of the indirect measures of FR quality, Beest et al. (2009) posit that some of the inconsistencies observed in the outcomes of many studies on FR quality could have resulted from using indirect measures. Beest et al. (2009) argue that “one explanation for these inconsistent results is that the indirect measures used in the empirical analyses focus on specific attributes of financial reporting information that are expected to influence the quality of financial reporting” (p.4). In addition, the indirect measures rely on secondary data as applied in Din (2021), Almaqtari (2020) and Odunayo and Festus (2020).

As mentioned above, Odunayo and Festus (2020) used three proxies for HR accounting. These proxies may be inadequate in measuring HR accounting, considering that Syed (2009) has developed a matrix containing fifteen HR accounting indicators. Micah et al. (2012) used the disclosure items identified by Syed (2009) to study the relationship between a firm's performance and HR accounting disclosure in Nigeria.

This study is an attempt to fill the gaps identified above. Therefore, the study used the direct measure of FR quality (qualitative features of FR) as operationalised by Beest et al. (2009) to measure FR quality to overcome the deficiencies of the indirect measures. In addition, the study also adopted the fifteen HR accounting disclosure matrices from Micah et al. (2012) to measure HR accounting disclosure. Therefore, this study investigated the relationship between HR accounting disclosure and FR quality using direct measures of FR quality and more disclosure items. The study also widened the scope of the population by extending it to cover nonfinancial companies listed on the NSE.

As noted above, HR accounting is bedeviled by many problems and challenges. Arkan (2016) asserts that finding solutions to these problems and challenges is key to successfully adopting and implementing HR accounting. One problem of HR accounting prevalent in prior studies is the absence of an agreed-upon valuation model for valuing human resources (Bonsu et al., 2019; Arkan, 2016). Bonus et al. (2019) investigated the reasons for not reporting human resources value on the balance sheet. The investigation found many factors responsible for the failure of Ghanaian companies to report human resources value as assets on their balance sheets. Some factors responsible for not recognising human resources as assets reported by Bonsu et al. (2019) include lack of specific guidance for valuing human resources, uncertainty about the service years of human resources, and the absence of an active market for human resources.

Therefore, due to the persistence of the low adoption level and conflicting results as to what constitutes the main problems of HR accounting, this study investigated the main challenges with HR accounting and the reason for the continued omission of HR value from the balance sheets of reporting entities.

1.3 Purpose of the Study, Research Aims, and Objectives

This quantitative study investigated the contributions of HR accounting disclosure towards improving the quality of FR of non-financial companies in Nigeria; identified the reasons for not reporting investment in human resources on the balance sheet; and the main problems and challenges of HR accounting in Nigeria. The research also aims at developing a valuation model for human resources by harmonising the existing models. This research also proposed how to treat human-resource-related payments in the accounting records of non-financial companies and how the monetary values would best be reported and presented in the financial statements.

Hossain (2015) posited that the money measurement concept of accounting does not allow for reporting of the HR value in the financial reports because of the difficulty in determining the monetary value of the employees' expertise. In addition, Fulmer and Ployhart (2014) indicate that accounting standards do not permit reporting entities to report the value of their human resources in their annual financial reports.

Jesuwunmi et al. (2017) describe the valuation of human resources as necessary. Accounting needs to provide stakeholders with information on the monetary value of employees (Jesuwunmi et al., 2017). Enyi and Akindehinde (2014) concluded that there is a need for valuing and recognising the value of HR in annual reports. An accounting system cannot provide reliable information on the monetary value of HR without a robust and reliable valuation model. Therefore, developing a model for valuing HR contributes to building a reliable HR accounting system (Rekha & Pavithra, 2019). Arkan (2016) suggested that developing a sound valuation model would positively influence the rate of adoption of HR accounting. Generally, the findings from this research contribute to developing a robust reporting framework for HR accounting and improving its acceptance and adoption.

Studying the relationship between HR accounting disclosure and the quality of FR, as well as understanding the contribution of such disclosure to improving the quality of FR, will serve as one of the foundations for recommending changes to Nigeria's current voluntary disclosure of HR accounting information by non-financial companies. A positive outcome in the relationship between HR accounting disclosure and FR quality will imply that improving such disclosure will lead to improved FR quality and support the findings of studies that call for improvement in HR accounting disclosure.

Current accounting practice does not allow reporting entities to attach monetary values to their human resources (Hossain, 2015) and recognise them as assets on their balance sheets (Atul & Preeti, 2019; Shreelatha et al., 2018; Monday, 2017). Fulmer and Ployhart (2014) explain that the accounting standards which govern FR in many countries do not allow reporting entities to record and recognise the value of their human resources in financial reports for external users. This traditional accounting practice makes reporting entities expense whatever amount they invest in their human resources in the year such investments occur (Jesuwunmi et al., 2017; Hossain, 2015, Fulmer & Ployhart (2014). Following this practice, all investments in human resources are excluded from the balance sheet, whereas other forms of investments, including investments in intangibles like goodwill and patents, are recognised and on the balance sheet (Atul & Preeti, 2019; Shreelatha et al., 2018; Monday, 2017). As a result of traditional accounting practice, this critical asset (human resources) is undervalued and underreported in financial reports (Arkan, 2016; Hossain, 2015). Another downside of conventional accounting practice is that expenses are overstated, with a resultant reduction in the profits of the reporting entities (Panchal, 2021; Adejuwon et al., 2020; Wyatt & Frick, 2010). Investigating the rationale and factors that make it impossible for conventional accounting to recognise the value of investments in HR as assets on the balance sheet will undoubtedly lead to modifications in the conceptualisation of HR accounting (Bonsu et al., 2019).

Previous studies indicate that some entities are reluctant to adopt HR accounting due to its numerous challenges (Bonsu et al., 2019; Arkan, 2016). For example, Ibarra and Cosico (2016) found a relatively low degree of adoption and understanding of HR accounting in the Philippines. Some studies have indicated that for human resources to be accepted entirely into the framework of financial reporting, it has to overcome some critical challenges and problems (Monday, 2017; Islam & Sarker, 2016; Ogenyi & Oladele, 2015). Therefore, studying and identifying the problems and challenges of HR accounting in Nigeria will help find solutions to them and promote the adoption of the concept in the country (Ibarra & Cosico, 2016). Some of the challenges and problems of HR accounting include the lack of an acceptable method of valuing human resources (Bonsu et al., 2019; Arkan, 2016), lack of an established framework for auditing HR accounting information, lack of awareness among stakeholders (Ibarra & Cosico, 2016), fear of exposing corporate confidential information, and fear of manipulation by management (Bonsu et al., 2019; Islam & Sarker, 2016). This study aims at identifying and rank the problems and challenges of HR accounting in Nigeria.

Judging the points in the preceding paragraphs and considering the research questions of this study, the precise aims of the research are as follows:

1- To determine the relationship between HR accounting disclosure and the quality of FR.

2- To determine whether HR accounting disclosure improves the quality of FR. 3- To identify the reasons behind the exclusion of investment in human resources from the statement of financial position.

4- To identify the main factors militating against adopting HR accounting in Nigeria.

1.4 Nature and Significance of the Study

The current research studied the association between HR accounting and FR quality, the problems, and the challenges of HR accounting in Nigeria. Furthermore, this research analyses how professional accountants see the contribution of HR accounting towards improving FR quality. In addition, the research proposed a valuation model suitable for non-financial companies in assigning monetary value to human resources. The study further suggests how the HR value of reporting entities would be integrated into the accounting system and reflected in the financial reports.

This study uses a quantitative research approach. This research design involves collecting, analysing, and interpreting quantitative data (Saunders et al., 2019; Creswell, 2018; Smith, 2003). This study uses the positivist approach using deductive reasoning. The study used a multi-method quantitative methodology. The multi-method quantitative method is a research method that uses both primary and secondary data (Saunders et al., 2019).

This study is based on survey research that collected primary data from qualified professional accountants through a five-point Likert scale online questionnaire and secondary data from the audited financial reports of selected non-financial companies. The study adopted a crosssectional approach in collecting the primary data and a longitudinal research design for collecting the secondary data. Therefore, the secondary data utilised in this study is from the 2019 financial reports of the sample.

The population of this study comprises a primary population of professional accountants and a secondary population of non-financial companies listed on the NSE. The total population of professional accountants is 85, while the population of the listed non-financial companies is

122. This study used Taro Yamme's formula for determining the sample size of a finite population to determine the sample size of the population (both the population of accountants and the population of the companies).

This research used two data collection instruments. The tool used for collecting primary data was an online structured questionnaire, while the secondary data collection instrument was also a structured data collection instrument. The questionnaire was subjected to pair review and Cronbach's alpha to ascertain its validity and reliability. The secondary data collection instrument has two main sections. One of the sections is collecting HR accounting disclosure data used to construct the HR accounting disclosure index. The second section is collecting data about FR quality. The information was used to develop the financial reporting index.

Before conducting data analysis, the data collected is presented in tables and figures. The study adopted regression analysis in analysing secondary data to determine the relationship between HR accounting disclosure and FR quality. Furthermore, the Kruskal-Wallis test was applied to analyse the primary data.

Before embarking on this research, the researcher submitted a proposal to the University's Research Ethics Committee (UREC) for vetting and approval to ensure that the research conforms to the required ethical research standards.

As noted by authors like Arkan (2016) and Ibarra and Cosico (2016), HR accounting is a developing field in accounting that needs more grounding in its concepts and framework. Prior studies also reported a low level of awareness about HR accounting. For instance, in a study involving companies in the Philippines, Ibarra and Cosico (2016) reported a low level of awareness about HR accounting in the country. Therefore, Opoku (2021) and Onyekwelu et al. (2015) recommend that there is a need to create more awareness about HR accounting.

Professional accountants are stakeholders in financial reporting. As a result of including professional accountants as respondents, this study raised awareness regarding HR accounting.

Specifically, the study would help regulatory and accounting standards-setting bodies in Nigeria and internationally in formulating and developing specific guidelines and accounting standards on HR accounting. This also applies to recognised accounting associations like the "Institute of Chartered Accountants of Nigeria (ICAN)" and the "Association of National Accountants of Nigeria (ANAN)," which are critical stakeholders in accounting in Nigeria as members of both the "Financial Reporting Council" of Nigeria (FRC) and the "International Federation of Accountants (IFAC)" (FRC, 2019; IFAC, 2019; Ellioit & Elliot, 2017; Abubakar, 2011, p. 95). The two professional accounting bodies can also use the findings and contents of this research report for the training and enlightenment of their members. Furthermore, professional accounting bodies can use the research outcomes to suggest to both FRCN and IFAC the desirability of standardising HR accounting. Other groups interested in this research include management and boards of organisations, human resources managers, employees, investors, scholars, researchers, financial analysts, and students.

As highlighted above, this research studied the association between HR accounting information and FR quality. This research is one of the few studies in this area. One of the contributions of this research is using the qualitative features of FR in measuring and constructing the FR quality index to study the contribution of HR accounting to FR quality. Apart from furthering the application of the operationalisation of the qualitative FR quality via research (which, according to Beest et al. (2009), is a request by the IASB), this study demonstrates how the operationalisation of the qualitative characteristics of FR quality can be used in determining the contribution of HR accounting to the quality of FR. Therefore, apart from contributing to the existing literature, this research will interest researchers who want to further the relationship between HR accounting and FR quality.

Studies have revealed that firms in many developing countries are yet to adopt the concept of HR accounting, resulting in low HR accounting disclosure (Wiyadi et al., 2021; Akintoye et al., 2018; Ibarra & Cosico, 2016). Studies have further attributed the low adoption of HR accounting to the many problems and challenges of HR accounting (Janshanlo et al., 2019; Bonsu, 2019; Arkan, 2016). This study also investigated the problems and challenges of HR accounting in Nigeria. This investigation can help know and find solutions to these problems and challenges. It can help promote the adoption of HR accounting among reporting entities in Nigeria. Therefore, this research would be relevant to researchers, practitioners, regulators, and advocates of HR accounting.

Among the significant challenges of HR, accounting is the absence of an acceptable valuation model (Shukuhian & Ashraf, 2019; Akintoye et al., 2018; Arkan, 2016; Naghshbandi et al., 2016; Rahaman et al., 2013). The development of a valuation model and a framework for accounting and reporting HR accounting in this study are aimed at finding solutions to some lingering challenges of HR accounting and contributing to the literature (Arkan, 2016).

The research on HR accounting is an attempt to improve the concept and application, eventually improving accounting practice and financial reporting. As argued by Ogenyi and Oladele (2015), Onyekwelu et al. (2015), and Ijeoma et al. (2013), accounts prepared using the concept of HR accounting provides a more accurate picture of an organisation. Adopting the recommendations of this research would lead to the production of more comprehensive financial reports that show a “true and fair view” of the affairs of non-financial companies (Omole et al., 2017, p. 122). Comprehensive financial reports that recognise the HR value would enable the management and other stakeholders to consider the position of human resources in making investments and other decisions. Such financial reports would also affect how various organisations deliberate on the engagement and disengagement of workers.

In general, apart from contributing to the literature on HR accounting, this study will contribute to the development of this new field of accounting through the discovery of an alternative valuation model and method of treating human resource costs in the books of accounts, which in turn will enhance the comprehensiveness of accounting reports and quality FR quality. The sum effects of these are a better knowledge of the status of a firm's affairs among its peers, which provides a more reasonable basis of comparison, and improved decision-making.

1.5 Research Questions and Research Hypotheses

This section contains the research questions that this study investigated. According to Creswell and Creswell (2018), research questions and hypotheses serve as the second signpost in research. The first signpost is the purpose statement. There are four research questions. Each of the four research questions is directly related to a corresponding research objective under section 1.3. The hypotheses follow the sub-section for the research questions. The four hypotheses are the expected answers to the four research questions.

1.5.1 Research questions

Generally, scientific research starts with topics that a researcher narrows to specific research questions (Neuman, 2007). In discussing the research process, Bhattacherjee (2012) explains that selecting the research questions is part of the first phase of scientific research. Research questions are arrived at through a thorough examination of the existing empirical studies on the topic of study (Neuman, 2007). In addition to finding answers to the research questions, scrutiny of the literature reveals the current state of knowledge in the field. Moreover, it also helps in identifying the relevant theories that can help answer the research questions. In a prosed research, a researcher identifies and selects a research question for further investigation (Bhattacherjee, 2012).

This research sought answers to four research questions. The first research question concerns the relationship between HR accounting disclosure and FR quality. The second research question is about how HR accounting disclosure contributes to the quality of FR. The third research question enquired about the possible reasons for excluding the value of human resource investment from the balance sheets of reporting entities. The fourth research question concerns the main challenges of HR accounting in Nigeria. The following are the four research questions that this study investigated.

RQ1: What is the relationship between HR accounting disclosure and financial reporting quality?

RQ2: Does HR accounting disclosure contribute to the quality of FR?

RQ3: What are the reasons for excluding investment in human resources from the statement of financial position?

RQ4: What is the major challenge of HR accounting in Nigeria?

1.5.2 Hypotheses

In scientific research, researchers inform guests about the possible answers to the research questions they intend to investigate (Creswell & Creswell, 2018; Saunders et al., 2016). Therefore, this section of the thesis discusses the hypothesis of this research. There are four hypotheses in this research. Each hypothesis has roots in theory and empirical results from prior studies.

Below are the hypotheses of this study.

1. H_0 - There is no significant positive relationship between HR accounting disclosure and FR quality.

2. H_0 - There is no significant difference among accountants that HR accounting disclosure improves the quality of FR.

3. H_0 - There is no significant difference among accountants regarding the reasons for excluding investment in human resources from the statement of financial position.

4. H_0 - There is no significant difference among accountants on whether the lack of a generally accepted valuation model for human resources is the major challenge of HR accounting in Nigeria.

1.6 Definitions of keywords

Creswell and Creswell (2018) advised researchers to define key terms used in their studies, thus: “define terms that individuals outside the field of study may not understand and that go beyond common language” (p. 79). Therefore, this section of the thesis provides the definitions of the keywords used in this study.

1.6.1 Accountants or Professional accountant

According to the Cambridge Dictionary, the word "accountant" refers to "someone who keeps or examines the records of money received, paid, and owed by a company or person" (Cambridge University Press, n.d.). Collins English Dictionary and Thesaurus, Essential Edition (CEDT) describes an accountant as "a person who maintains and audits business accounts" (Intangible Press, 2021).

In this study, the terms "accountant" and "professional accountant" are used interchangeably to mean a person who is a member of a recognised professional accounting association. When used in reference to Nigeria, the terms refer to the members of ANAN and ICAN.

1.6.2 Disclosure

The term "disclosure" is a noun and is related to the word "disclose" (a verb), which, according to CEDT, means "to make (information) known" (Intangible Press, 2021). The Dictionary of Finance and Investment defines "disclosure" as the "release by companies of all information, positive or negative, that might bear on an investment decision..." (Downes, 1998).

Disclosure is one of the two ways of reporting information in financial reports. According to Elliott and Elliott (2017), "the financial statements should include a set of disclosures, commonly called notes that further clarify the contents of the information presented within the statements" (p. 52).

In this study, "disclosure" refers to providing information in financial reports in any manner other than through an income statement or balance sheet.

1.6.3 Financial statements, financial reports, annual accounts, annual reports

The Oxford Dictionary of Accounting defines "annual accounts" as "the financial statements of an organization, generally published annually." The Accounting and Finance Dictionary defines the term as "a series of reports showing a summary view of the various financial activities of the organisation at a specific point in time" (Omoniyi, 2017; Oxford University Press, 2003).

In this study, the terms are used interchangeably to mean the published, audited annual reports that registered companies are mandated to produce at the end of each financial year. The terms are sometimes used together with the word "published", for example, "published annual reports."

1.6.4 Non-financial companies

The Cambridge Dictionary explains that the term "non-financial" is a term "used to describe a company that is not a financial institution" (Cambridge University Press, n.d.). Banks, insurance, mortgage, and investment companies are usually called financial companies or institutions. Companies other than these are called non-financial companies.

In this study, the term "non-financial companies" refers to companies operating in any industry other than the banking, finance, investment, mortgage, and insurance industries or those not listed under the financial services sector of the NSE.

1.6.5 Recognition

According to the Cambridge Dictionary, the word "recognition" means an "agreement that something is true or legal" and is synonymous with "acceptance" and "acknowledgement" (Cambridge University Press, n.d.).

In accounting, an item or transaction is said to be recognised when reported through any of the two main statements (income statement and balance sheet). IASB (2018) defines recognition as "the process of capturing for inclusion in the statement of financial position or the statement(s) of financial performance an item that meets the definition of an asset, a liability, equity, income or expense" (p.10). Generally, companies recognise income and expenses in their income statements. They also recognise assets, liabilities, and equity on their balance sheets. In this study, "recognition" refers to reporting the value of an item on the balance sheet. For instance, recognising the value or investment in human resources as an asset on the balance sheet.

Chapter 2: Literature Review

2.1 Introduction

This section explores past research on HC, HR accounting, and FR quality concepts. The conceptual framework of this research is premised on the need to improve FR quality by including HR value in audited accounts and reports of reporting entities. The possibility of achieving this is subject to the existence of a reliable model of valuing human assets and their proper accounting and presentation in the audited accounts. To this end, a literature review on HR accounting in Nigeria was conducted to help determine, among others, the problems associated with HR accounting in Nigeria. The review also provides an avenue to identify how such problems and challenges are confronted in different countries. The review is essential in helping to find solutions to some of the challenges. The study proposes a suitable valuation model for human resources and how to account for and present the money value of HC in the FR to address one of the significant challenges of HR accounting.

To achieve the aim of this study mentioned above, the researcher consulted available literature, the results of which are presented in this chapter under relevant sub-topics. Firstly, the investigation is supported by relevant theories found in the literature and a description of the industry used in the research. The review also considers the development and concept of HR accounting, how reporting entities in Nigeria account for and report HR, HR valuation models, and the challenges of HR accounting. To ensure a thorough literature search, this researcher conducted internet searches using keywords and combinations of keywords like human capital, HR accounting, human asset accounting, human capital accounting, human resource valuation models, financial reporting, and FR quality. The search engines and databases consulted include the university’s library (ProQuest), Google Scholar, Research Gate, and Academia.

The literature search allows the researcher to access literature from around the world and study HR accounting practices and levels of adoption in various countries.

2.2 Theoretical Framework

This section of the thesis discusses the theories that underpin this study. A theoretical framework has been described as “... the 'blueprints' or guide for a research...” (Adom et al., 2018, p. 438). In scientific research, a theoretical framework serves as a guide and a road map for achieving the research objectives. Adom et al. (2018) elucidate that the formation of a theoretical framework is “based on an existing theory in a field of inquiry that is related and/or reflects the hypothesis of a study” (p. 438).

Although some theories have gained more acceptance in the literature than others, no single theory can be said to be ideal in a dissertation (Grant & Osanloo, 2014). Even though many theories can be applicable, the most relevant theories underpinning this research are those discussed in this section. The logical explanation of the theories lies in the fact that HC has all the attributes to warrant its classification as an essential resource, which makes or breaks any organisation and helps it to achieve and maintain a competitive advantage (Boutchich, 2020; Adejuwon et al., 2020; Shukuhian & Ashraf, 2019; Olayiwola, 2016). Given this position, accounting has to develop some form of measurement in line with the money measurement concept and report the HC value in the audited accounts and reports.

Several theories can help to anchor this research. After carefully reflecting on the nature of HR, accounting principles and economic realities, four theories have been selected to underpin the current study. The theories underpinning this research are the human capital theory, the resource-based view theory, the stakeholder theory, and the financial reporting theory.

Discussions about these theories and how they relate to this study are in sections 2.2.1.-2.2.4.

2.2.1 Human capital theory (HC Theory)

The HC theory is essential in underpinning HR accounting. The theory originates in labour economics and is closely related to production theory (Bello & Egbe, 2021; Odunayo & Festus, 2020; Samuelson & Marks, 2012). According to the theory of production, firms cannot engage in production unless they combine the four factors of production (Samuelson & Marks, 2012). According to Sharma and Shukla (2010), "Physical assets like plants, machinery, buildings, and the rest are unproductive without human resources" (p. 131). One of these factors is labour, which is human capital and is seen as essential because it combines both the land and the capital for production. Therefore, there will be no production without HC (Samuelson & Marks, 2012; Breton, 2014).

An economist known as Theodore Williams Schultz established the human capital theory (Odunayo & Festus, 2020; Breton, 2014; Ibukun-Falayi & Falayi, 2014; Ullah et al., 2014; Okpala & Chidi, 2010). After the Second World War, Schultz wanted to investigate why Japan and Germany recovered faster than the United Kingdom even though the two countries suffered more damage during the war. He discovered that the two countries had more educated and healthy populations than the United Kingdom (Akintoye et al., 2018; Breton, 2014; Ibukunfalayi & Falayi, 2014).

Breton (2014) explains that the human capital theory expounded by Schultz has three elements: "1) Countries without much human capital cannot manage physical capital effectively, 2) Economic growth can only proceed if physical capital and human capital rise together, and 3) Human capital is the factor most likely to limit growth" (p. 1). The HC theory has its basis on the belief that no production will occur without human capital and that the more education and training, the greater the efficiency and productivity of the labour force (Bryl & Fijalkowska, 2020; Janshanlo et al., 2019; Moloi & Adelowotan, 2019; Oko, 2018). Many HR accounting researchers rely on the HC theory to back up their arguments. Some of the studies on HR accounting underpinned by human capital theory include Boutchich (2020), Adekunle and Benjamin (2018), Inua and Oziegbe (2018), Oladele et al. (2018), Akintoye et al. (2017), Onyinyechi and Ihendinihu (2017), Ibukun-falayi and Falayi (2014), Enyi and Akindehinde (2014), and Micah et al. (2012).

As indicated in the preceding paragraph, researchers have linked human capital theory with the concept of HR accounting to form the basis of their arguments (Adekunle & Benjamin, 2018; Akintoye et al., 2017; Onyinyechi & Ihendinihu, 2017). Although there are arguments against the value-relevance of treating HR values as assets in the audited accounts and reports, HR accounting provides an undeniably strong argument (Micah et al., 2012).

2.2.2 Resource-based view (RBV)

The RBV theory is a theory that postulates that organisations own resources and that these resources help the organisations achieve competitive advantage and improve efficiency in the long run (Alalie et al., 2018; Saad & Hassan, 2013; Abhayawansa & Abeysekera, 2008). According to the RBV, the productive and unique resources that help an organisation acquire a competitive advantage against rivals are the most valuable (Saad & Hassan, 2013; Abhayawansa & Abeysekera, 2008). The theory combines many concepts from strategic management and organisational economics (Inua & Oziegbe, 2018; Wade & Hulland, 2004). RBV theory shows that an entity's performance depends on its resources (Alalie et al., 2018; Liang & You, 2009; Bharadwaj, 2000).

Building on the previous work on this theory, Barney (1999) argues that only resources that possess some specific attributes can positively affect the performance of a business organisation uniquely and give it a competitive advantage over others. According to Barney (1999), for a resource to be in this category, it must be valuable, scarce, not easily have counterfeits (imitation), and not have a perfect substitute. Based on the attributes, firstly, the resource must be valuable enough to help enable the entity to develop or execute strategies to enhance efficiency in operations and management functions. Secondly, the resource should possess some form of rarity, such that not all or many competitors have it. Thirdly, the resources should be imperfectly imitable. The resources should be hard to copy; the resources should not be easily copied or replicated by others. Hence, others cannot perfectly imitate the resources. The resources should be non-substitutable (Abhayawansa & Abeysekera, 2008; Wade & Hulland, 2004; Barney, 1999).

Looking at the above four points, it will be appropriate to conclude that human resources fulfil all the attributes and requirements of the RBV. Therefore, it has the potential to influence the competitive advantage of a reporting entity. Akintoye et al. (2018) and Amahalu et al. (2017) used this theory to underpin their research.

2.2.3 Stakeholder theory

According to some authors like Gomes (2006), Freeman (1984) is credited with developing the stakeholder theory. Stakeholders are those who are affected by an organisation's decisions, actions, or inactions (Vithana et al., 2019). The concept of stakeholders also encompasses those whose decisions, actions, or inactions can affect the organisation (Vithana et al., 2019). Freeman (1984) concisely defined a stakeholder as “any group or individual who can affect or is affected by the achievement of the organization's objectives” (p. 47). Therefore, each organisation has a diverse set of stakeholders. These stakeholders are of two classes: primary stakeholders and secondary stakeholders (Vithana et al., 2019; Gomes, 2006). Therefore, Gomes (2006) described primary stakeholders as “those who have a formal and economic relationship with the organization” and went further to describe secondary stakeholders as “those agents not directly related to the organisation despite being able to influence and be influenced by its operation and outcomes” (p. 50).

According to the stakeholder theory, diverse interest groups and individuals with differing interests surround business organisations (Vithana et al., 2019; Oladele et al., 2018; Ekundayo

& Odhigu, 2016). Some groups and individuals' interests and decisions affect the firms, and the firms' decisions and indecision affect the interest groups and individuals (Vithana et al., 2019). Therefore, Hamzah et al. (2013) posited that “the stakeholder theory states that the management of a company should act in a way that is expected by all affiliate groups and persons” (p. 55). Therefore, the stakeholder theory imposes an obligation on organisations to recognise the existence and interests of all stakeholders (Ekundayo & Odhigu, 2016).

Based on the stakeholder theory, organisations should operate in the interests of all stakeholders (Hamzah et al., 2013). Operating in the interests of all the stakeholders includes providing these stakeholders with the relevant information (Vithana et al., 2019; Hamzah et al., 2013). Organisations should provide this information to their stakeholders regardless of whether the stakeholders choose to use the information or not (Ekundayo & Odhigu, 2016; Hamzah et al., 2013). Vithana et al., 2019 posited that stakeholder theory “has been relied upon to explain the reporting of social practices reflecting the informational needs of multiple stakeholder groups” (p. 4). Furthermore, Ekundayo and Odhigu (2016) opined that the stakeholder theory “suggests that all stakeholders have a right to be provided with information on how organisational activities impacted on them even if they choose not to use it” (p. 107). One way of providing information to stakeholders is through the annual reports. Providing information to stakeholders is the essence of financial reporting (Hamzah et al., 2013).

Providing HR accounting-related details in the financial reports is mostly voluntary (Hamzah et al., 2013). The current financial standards do not impose on firms the obligation to report most HRA disclosure items (Hamzah et al., 2013). However, Hamzah et al. (2013) maintain that the provision of details relating to human capital is particularly important because of the position of human resources within the firm as a value creator. Moreover, Mili and Hashim (2020) explained that human resources are a necessary element for the achievement of the long-term goals of an organisation, “besides, stakeholders such as investors, creditors, workforce, employee envoys, regulatory bodies, along with non-governmental institutions have need of human resource related news” (p. 42). Therefore, providing stakeholders with reliable HR accounting information in the corporate annual reports complies with stakeholder theory's expectations.

2.2.4 Financial reporting theory

It is through financial reporting that accounting provides stakeholders with relevant information (Hamzah et al., 2013). The main goal of financial reporting is to provide stakeholders with pertinent financial information. (Elliot & Elliot, 2017). Accounting standards, ethics, legislation, and regulations govern the process of financial reporting. Financial reporting theory links with the stakeholder theory in that stakeholders use the reports for decision-making. Therefore, financial reporting is one of the avenues through which a company can satisfy some of the informational needs of its stakeholders (Mili & Hashim, 2020; Hamzah et al., 2013).

In discussing financial reporting theories, the issue of regulation is necessary. Although financial reporting is regulated in many countries (Muttakin et al., 2020; Bonacim & Araujo, 2014), the literature indicates differences of opinion among experts on whether financial reporting should or should not be regulated (Bushman & Landsman, 2010). The experts who oppose the use of regulations on financial reporting believe that financial reporting would be much better if left unregulated. They also argue that firms should be allowed to decide on what and how to report in their financial reports. On the other hand, those experts in favour of regulating financial reporting believe that regulating financial reporting will ensure uniformity, standardisation of the reporting framework and ease comparison among different reporting entities (Abubakar, 2011; Bushman & Landsman, 2010).

There are two ways to present items in the financial report, namely: by way of recognition and by way of disclosure (Elliot & Elliot, 2017; Petkov, 2010). Items that have full acceptance in the accounting world with acceptable means of identification and measurement appear in the statements of annual reports (Barnes et al., 2019; Bragg, 2018; Elliot & Elliot, 2017). Such items can either be assets, liabilities, income, or expenditures. Items that do not fulfil the above criteria but are adjudged to be important are disclosed in the financial reports as notes (Barnes et al., 2019; Bragg, 2018; IASB, 2018).

FR quality is an essential concept in financial reporting. The quality of FR strengthens the confidence of investors and other decision-makers in making a reliable decision about a firm. The objective of FR quality is to ensure the accurate portrayal of a firm's financial position and performance to allow for reliable and informed decision-making by investors and other stakeholders (Herath & Albarqi, 2017). All things being equal, the information provided in high-quality financial reports is more reliable, and the decisions made based on the reports are also reliable, all things being equal. Herath and Albarqi (2017) noted that the value-relevance of accounting information depends on FR quality. The IASB (2018) identified six factors that influence the quality of FR. A high-quality financial report conveys relevant, reliable, comparable, understandable, timely information, and relevant items must be faithfully represented (Herath & Albarqi, 2017).

2.3 Conceptual Review

In a study of this nature, it is pertinent to trace the development of the main concepts of the study. Tracing the development of these concepts will help identify the contributions of theorists and researchers and revive the interest of both theorists and practitioners. HR accounting remains an area that accounting theorists have been exploring for a long time, but it is yet to get full acceptance in accounting and financial reporting (Shukuhian & Ashraf, 2019; Monday, 2017). As such, the field continues to linger in theory without any visible acceptance and application in practice. Even though some companies adopt some aspects of the concept voluntarily, HR accounting is yet to have official recognition and acceptance.

2.3.1 Development of accounting for human resource

Many writers consider human resources crucial in the economic manipulation of resources for production and believe such resources should be measured (Shukuhian & Ashraf, 2019). Although attributing value to a human being is new to accounting, history has shown that economists have contributed in this direction (Arkan, 2016). Before accountants started paying attention to the need to treat employees as assets, economists recognised human resources as capital under the human capital theory and as one of the factors of production in the production theory (Ezejiofor, John-Akamelu, & Iyidiobi, 2017). Thus, economists refer to the workforce as human capital. Treating the workforce of a firm as human capital (asset) is a clear divergence from traditional accounting, which sees investment in human resources as an expense (Akintoye et al., 2018; Dhirubhai, 2018; Dey & Sarkar, 2015). The period when accounting developed may have influenced its inability to recognise employee investment as an asset. Generally speaking, accountants at that time showed little interest in human resources. (Godfrey et al., 2010; Stanko et al., 2014; Onyinyechi & Ihendinihu, 2017). During the industrial revolution, an “accounting system that could address aggregation of capital, methods of labour remunerations, depreciable assets, production cost, and income determination was developed” (Adeleke et al., 2018, p. 200). During the industrial revolution, interest was mainly in physical assets and not human resources (Elliot & Elliot, 2017). During this period, business organisations were competing to acquire machinery and equipment to help them in their operations and out-perform their rivals (Godfrey et al., 2010). Accounting witnessed most of its breakthroughs during the industrial revolution (Elliot & Elliot, 2017; Godfrey et al., 2010).

Elliot and Elliot (2017) rightly observe that despite blending other firms' resources with HR and the significant investment in HR development during the industrial revolution, intangible assets (including HR) were not accorded due recognition in accounting. Elliot and Elliot (2017) argue that despite the importance of intangible assets like HR, “accounting and financial reporting practices, however, have remained largely unchanged” (p. 483). Elliot and Elliot (2017) further explain that “expenditure on intellectual capital (except for development costs) is expensed, net assets are understated, and book values of the assets bear little relationship to market values” (p. 483). The accounting practice concerning HR costs and other intangibles resulted in a deficit in the information provided to stakeholders. Elliot and Elliot (2017) assert that the traditional accounting treatment of intangibles “makes it more important for stakeholders to refer to non-financial disclosures in the annual reports and elsewhere” (p. 483).

The demise of the industrial revolution and the transition of world economies to information and knowledge-based economies revived interest in research on human capital in economics and HR valuation and accounting by accountants (Odunayo & Festus, 2020; Oko, 2018; Kaur et al., 2016). Generally, human resource accounting developed between 1960 and 1980 (Shukuhian & Ashraf, 2019). This period was characterised by noticeable changes in the history of human rights, freedom, democracy, technological advancement, and economic and educational developments (History of Nigeria, 2016).

African countries like Nigeria under colonial rule got the right to self-rule within the period, and there was a rise in the fight against the apartheid government of South Africa, which ended with its exit from the Commonwealth of Nations. A trade boycott followed the withdrawal of South Africa from the Common Wealth in 1961 by the United Nations in 1962 (History of Nigeria, 2016). The period saw an increase in the fight against human rights abuses, resulting in the formation of human rights organisations like Amnesty International by Peter Benenson in 1961 (Amnesty International, 2019). The establishment of Amnesty International and other human rights organisations is a complete departure from the period of the slave trade and a positive push towards the recognition of human rights and the dignity of labour. These events helped to highlight the importance of humans as the source of labour, a vital component in production and economic growth.

Some of the main events that pointed to the possibility of the technological development attained in recent years have their roots in the developments witnessed in the said period (19601980). Within this period, the internet, a principal contributor to the development of information technology, evolved. Information technology devices like computers and other technological advancements have also manifested. These and other developments have resulted in economies all over the world transitioning to information and knowledge-based economies, where the importance of human resources cannot be overstated (Monday, 2017; Arkan, 2016).

Despite appearing unrelated to one another, the chronology of the events outlined in the preceding paragraphs has affected the resurgence of interest among scholars in how to account for human assets. The advancement witnessed in the field of HR accounting from the time of the pioneering work is discussed in the subsequent paragraphs.

Researchers have identified five distinct periods or stages of development of the concept of accounting for human assets (Shukuhian & Ashraf, 2019; Ogenyi, 2014). The first stage of the development of the concepts is the period from the early to mid-1960s. It was during this period that academic participation in HR accounting research started. Most studies during this period concentrated on creating the idea of HR accounting from human capital theory, a theory in economics, and other theories related to psychology and the then-emerging concept of human resources (Tubey et al., 2015). The writers attempted to demonstrate how personnel and human resources were distinct from one another and how other intangibles were valued differently (Arkan, 2016).

Stage two (second stage) of the development of HR accounting took place between the late 1960s and early 1970s. During this time, researchers were more concerned with developing and validating the valuation models for HR accounting. Researchers tried to formulate some techniques suitable for use by organisations for assessing and managing their human assets. To this end, researchers developed HR accounting models based on cost, monetary, and nonmonetary values.

The third stage of the evolution of HR accounting saw a surge in research. During this period, many researchers mainly focused on applying the new concept to business. Researchers here tried to see how the practical application of HR accounting could affect organisations (Sharma & Lama, 2014).

The period between the late 1970s and early 1980s marked the fourth stage of the development of the concept. During this period, the interest of researchers in a new method of accounting for human assets declined. The lack of interest of researchers in the new concept is partly because organisations were not ready to sponsor some more rigorous research in the area. Even though some organisations found the idea behind HR accounting interesting, such organisations did not see significant benefits. Therefore, such organisations were not ready to fund the in-depth empirical research needed at that stage (Tubey et al., 2015; Sharma & Lama, 2014).

The period from 1980 to the present is the fifth stage. This stage is dominated by research to fine-tune the concept and further stabilise it to make it suitable for solving managerial problems and integrating it into the international financial reporting system (Shukuhian & Ashraf, 2019). This is necessary because the concept is still struggling for acceptance.

In many developing countries, HR accounting is a new concept that is struggling for acceptance (Moloi & Adelowotan, 2019; Oladele et al., 2018; Ibarra & Cosico, 2016; Ramat & Noah, 2013). For instance, in the Philippines, the level of awareness about HR accounting is low, and there is a low level of adoption by incorporated businesses (Ibarra & Cosico, 2016).

Although there have been some noticeable improvements in the voluntary adoption of the concept in India, the concept is still new. It is yet to be integrated into the country's accounting and FR systems. Companies like Associated Cement Company have adopted some aspects of the concept in their annual reports (Shukuhian & Ashraf, 2019; Gupta, 2016).

Ogenyi (2014) argues that there are very few empirical studies on the practical application of the concept of accounting for human assets in Nigeria, even though there are some studies in other countries about the extent of adoption and human asset-related disclosures by companies. Some studies indicate that companies in Nigeria are yet to appreciate and adopt HR accounting practices. For instance, Oko (2018) observes that in Nigeria, accounting for human resources “is yet to get momentum” (p. 1710). Even though some of these companies provide some HR accounting disclosure information like the total number of employees, the amount spent on training and development, and the like in their annual financial report, there are no attempts at assessing the value of the workforce. Researchers on HR accounting in Nigeria have shown that the country is far behind in adopting the new concept (Ezejiofor et al., 2017; Micah et al., 2012). Apart from some basic information about recruitment, promotion and training, there is no specific information regarding the value of the human assets in the annual reports.

2.3.2 Concept of accounting for human resources

Human capital theory underpins the concept of HR accounting (Ezejiofor et al., 2017). Human capital encompasses knowledge, competencies, motivation, capabilities, training, innovations, skills, and the ability to learn (Arkan, 2016).

HR accounting is a new branch of accounting that focuses on monetary quantification, appraisal, and reporting. HR accounting involves capitalisation, amortisation, and reporting this value in the statement of assets and liabilities among the intangible assets of a reporting entity (Akintoye et al., 2018; Shreelatha et al., 2018). Rahaman et al. (2013) define HR accounting "as the measurement process which recognizes cost and value of employees in the financial statements of an organization, as an intangible asset" (p. 3). According to Monday (2017), HR accounting has to do with the measurement of the monetary worth and value of the workforce of an organisation. Arkan (2016) sees it as the process of "accounting for people as human assets" (p. 174).

The position of this new accounting method on the treatment of human assets-related expenditure is against the position of the conventional accounting methods, which treat virtually all costs related to HR as part of the recurrent expenditure of the year the expenditure is incurred (Arkan, 2016). Such costs are charged against the profit of the year in the income statement. Unlike the new methods, conventional accounting does not try to value or measure human resources and does not consider them as assets.

The HR accounting concept has its basis on two main propositions. Firstly, the people within an organisation are essential and valuable assets which firms cannot ignore. Hence, the value of human resources should be comparable with other resources (Arkan, 2016). It follows, therefore, that there is a need for the quantification and capitalisation of human assets. Secondly, knowing the valuation of human assets is necessary. The quantification of human assets relates to the cost of acquiring, developing, redeveloping, training, and retaining the assets. The appraisal of human assets involves analysing the returns on investment in employees (Janshanlo et al., 2019). In HR accounting, the costs of recruitment, training, development, and related costs are investments, while the increase in productivity to be derived as a result of this investment, which will lead to higher profit, is the return from the investment (Ogenyi, 2014). Therefore, the new concept sees the workforce of an organisation as assets that provide future benefits to the organisation (Janshanlo et al., 2019).

Another significant aspect of the concept relates to financial reporting. The concept believes that human assets are part of intangible assets. As such, their inclusion in the statements of financial position is in line with the matching concept of accounting (Janshanlo et al., 2019; Ezejiofor et al., 2017), and their amortisation over their useful life span is per the depreciation theory. Akintoye et al. (2018) argue that treating investment in human assets as an expense in the income statement contradicts the often-repeated saying in the chairperson's statement in the financial reports of many reporting entities that the workforces of the entities are their most valuable assets. This view is consistent with the findings and assertions of many studies, which include Odunayo and Festus (2020), Asein et al. (2019), Fulmer and Ployhart (2014), and Stanko et al. (2014).

2.3.3 Accounting for human resources in Nigeria

Understanding how Nigerian companies account for investment in human resources can aid in determining the acceptability of the new concept of HR accounting in the country. There are two approaches to how organisations handle human resource-related costs. Treating such costs using traditional or conventional accounting and accounting for such costs using the new concept of HR accounting (Akintoye et al., & Benjamin, 2018; Shreelatha et al., 2018; Onyekwelu, Osisioma, & Ugwuanyi, 2015). Companies using conventional accounting methods treat investments in human resources as expenditures chargeable against the profit of the year in which they incur the costs (Janshanlo et al., 2019; Oladele et al., 2018; Shreelatha et al., 2018). Companies using this method do not treat human resource costs as an investment. Conversely, they treat the costs as expenses within the year incurred (Janshanlo et al., 2019; Oladele et al., 2018). Although human assets have peculiarities, human assets are considered intangible assets (Inua & Oziegbe, 2018; Akintoye & Ifayemi, 2016; Ogenyi & Oladele, 2015).

Before reviewing available studies on HR accounting practices in Nigeria, it will be relevant to consider the practice in other developing countries. There are reports of considerable and appreciable development in HR accounting in India (Sisodia et al., 2021; Bansal & Sharma, 2019). Although Sirisetti and Mallesu (2012) reported that HR accounting was yet to get momentum in India, that trend changed by 2014 when Sharma and Lama (2014) found that some companies have "made unprecedented effort to value and account human resources in the financial statements" (p. 22). By 2016, many Indian companies will have joined this new trend. Gupta (2016) described HR accounting in India as a phenomenon. He further asserts that major public sector companies now present the value of their human assets in their financial reports as supplementary information. Gupta (2016) maintains that Indian companies have adopted and modified the present value approach developed by Lev and Schwartz. Adopting the amended version of the Lev and Schwartz model is commendable and a giant stride towards full compliance with the concept of human capital accounting.

In another study involving nine public enterprises in India, covering the period 2006/17 to 2015/16, Shukuhian and Ashraf (2019) observed that most companies do not recognise their human assets properly. One of the implications of the findings of Shukuhian and Ashraf (2019) is that despite the advancements made by Indian companies in adopting HR accounting, there is a need for improvement.

In the Philippines, Ibarra and Cosico (2016) studied HR accounting and costing practices among forty-eight companies in Carmelray Park 1 in Calamba City. Ibarra and Cosico (2016) used human resources managers and supervisors, chief accountants and accounting supervisors, and finance officers of the sampled companies as respondents. The study found that the companies did not know about accounting for human assets. The findings from the investigation also revealed that the companies were using the conventional accounting method of treating human resources-related costs.

Similarly, in Jordan, public shareholding companies employ conventional accounting for investments in human assets (Al Hanini, 2018). However, unlike the situation in the

Philippines, in a study of Jordanian public shareholding companies, Al Hanini (2018) found an appreciable awareness of the new concept and that the companies recognised its importance.

Before examining the findings of studies conducted on HR accounting practices in Nigeria, it is necessary to consider the background of the regulatory structures for financial reporting and accounting use in the country. The principal law governing how published statutory annual financial reports should be prepared by companies operating in Nigeria and financial reporting, in general, is the “Companies and Allied Matters Act (CAMA)” 2020 (Aliu, 2019, p. 28; Omole et al., 2017, p. 122). This Act stipulates the minimum disclosure requirements in financial statements of a registered company and some basic rules about accounting and financial reporting right from the formation to liquidation or winding up. There is an argument that the Act is not detailed enough (Akintoye & Ifayemi, 2016), which led to various amendments and the re-enactment of the CAMA 1990 Act in 2014 and 2020. To strengthen financial reporting and complement CAMA, the Federal Government enacted another Act, the “Nigerian Accounting Standards Board (NASB)” Act, which established the NASB (Ogenyi & Oladele, 2015; Micah et al., 2012; Yahaya, 2011, p. 6). Then, the NASB was the organisation in charge of regulating accounting and financial reporting by issuing accounting standards in Nigeria (Adegboyegun et al., 2020; Akintoye & Ifayemi, 2016).

Before the adoption of the IFRS, Nigeria had local accounting standards known as the “Statements of Accounting Standards” (SAS) (Ramat & Noah, 2013; Yahaya, 2011). The NASB issued these standards (Ramat & Noah, 2013; Yahaya, 2011). One such standard is SAS 22, a standard on intangible assets, which the board issued in June 2006. NASB (Ramat & Noah, 2013, Micah et al., 2012). Although the standard recognises intangible assets as part of the assets of a reporting entity, the standard does not classify human resources, an intangible asset and a significant component of intellectual assets, as assets in the published financial reports by companies in Nigeria (Micah et al., 2012).

Nigeria enacted the FRC Act No.6 of 2011 in readiness to be IFRS compliant (Adegboyegun et al., 2020; Jayeoba & Ajibade, 2016). The country aimed to be fully compliant with the new standards by 2012. The FRC Act repelled the NASB Act and empowered the council to adopt IFRS and issue standards for Nigeria (Jayeoba & Ajibade, 2016).

Before the commencement of the issuance of IFRS, the "International Accounting Standards Committee (IASC)" was the body in charge of issuing the International Accounting Standards (IAS) up to 2001 (Kashive, 2013, p. 116). The two sets of standards aim to harmonise accounting practices and improve the informational content of financial statements and financial reporting internationally (Akintoye & Ifayemi, 2016). Similarly, SAS 22 and IAS 38 recognise intangible assets as part of the assets reported in the annual reports by reporting entities (Janshanlo et al., 2020; Micah et al., 2012; Kashive, 2013). According to IAS 38, reporting entities may recognise intangible assets if they have control over the assets, can identify the assets, and if the assets are capable of providing future benefits. (Akintoye & Ifayemi, 2016; Ogenyi & Oladele, 2015). Some researchers believe that even though the provision of IAS 38 does not require reporting entities to adopt HR accounting, it is enough to entice companies to adopt HR accounting (Kirfi & Abdullahi, 2012; Kashive, 2013). Despite widespread adoption of the IFRS, some studies show that reporting entities in Nigeria have continued to use the traditional method of accounting for human capital investment (Asein et al., 2019; Oko, 2018; Ezeagba, 2014).

Ogenyi (2014) contends that empirical studies on accounting for human asset practices in Nigeria are not available in the public domain. Ogenyi (2014) also posits that most of the available literature is on accounting for human assets disclosures and accounting for human assets and profitability. Expressing a similar view, Oladele et al. (2018) maintain that there is a scarcity of research on human capital accounting in Nigeria.

A further review of the literature reveals that although there may be a paucity of research on HR accounting in Nigeria and other countries, there exist some empirical studies enough to give a clue as to how companies in Nigeria account for their investments in human assets (Garg & Kumar, 2019; Verma & Kirti, 2019; Oladele et al., 2018; Ezejiofor et al., 2017; Kaur et al., 2014). Several of these studies reveal that the practice of accounting for human assets is not yet in use in Nigeria or, at best, is at its infancy stage (Oladele et al., 2018; Ogenyi & Oladele, 2015; Ogenyi, 2014). The lack of fully developed systems of HR accounting in Nigeria may not be unconnected with the fact that HR accounting originated and was primarily developed in the United States. Nigeria inherited most of its legal, financial, and economic systems from the United Kingdom, its colonial master (Akintoye & Ifayemi, 2016).

In empirical research on the connection between the disclosure items of HR accounting and the financial achievements of reporting entities in Nigeria, Micah et al. (2012) found that companies spend millions of Naira on training and developing their human assets. The companies report the amounts as part of their expenses. The researchers further observed that the practice reduces their profit. According to the researchers, companies do not correctly declare such amounts as assets. This means that these companies use conventional methods of treating human resource-related costs. The researchers further suggest using regulatory interventions through the issuance of standards that will help identify and measure human assets. Micah et al. (2012) believe that doing so will enhance reliability, uniformity in disclosure, and comparability of HR accounting information.

In a study on how to improve HR accounting through IFRS, Ibukun-falayi and Falayi (2014) examined the financial statements of First Bank of Nigeria from 2012 to 2013. Ibukun-falayi and Falayi (2014) identified gaps in the bank's practises regarding the concept of HR accounting based on existing accounting standards. Therefore, the researchers advocated for the issuance of IFRS specifically on how to quantify, account for, and report human assets.

In empirical research involving twenty quoted companies in Nigeria covering 2011–2015, Oladele et al. (2018) found that Nigerian firms do not apply HR accounting techniques in reporting human assets. Oladele et al. (2018) also recommend setting a minimum benchmark for reporting information on human assets in the annual reports. In another recent study, Oko (2018) concluded that the CAMA did not contemplate or make provision for the quantification and presentation of HR value in the annual reports. He further argues that "the concept of human resource accounting is yet to gain momentum in Nigeria..." (p. 1711). Companies in Nigeria only voluntarily report some information related to human capital in the statutory reports.

Some of the information related to human assets being disclosed by reporting entities in Nigeria as part of discretionary disclosure includes the total number of employees, the amount spent on training and development of staff, and the like. (Micah et al., 2012). However, there is no report of the valuation and presentation of the value of human assets by reporting entities in Nigeria in their audited accounts (Bello & Egbe, 2021). This is in contrast to what is obtainable in countries like India, where a reporting entity called Infosys Technologies Limited has developed some form of HR accounting system (Khodabakhshi, 2015; Natarajan & Nawaz, 2012). It can be asserted, therefore, that compared to reporting entities in India, the degree of adoption of the concept of HR accounting by the reporting entities in Nigeria is not appreciable.

2.3.4 Accounting and reporting human resources in the financial reports

Generally, reporting entities present the results of their financial activities in their financial reports in either of two ways: by way of recognition or by way of disclosure (Elliot & Elliot, 2017; Bragg, 2019; Koppeschaar et al., 2019). Recognition of an item is through its inclusion in one of the two main statements in the financial statements as a monetary value (Elliot & Elliot, 2017; Bragg, 2019; Koppeschaar et al., 2019). Reporting entities present the assets and liabilities they recognise, along with their financial status. Reporting entities also recognise and match income and expenditure to determine the profit or loss for the year (Elliot & Elliot, 2017; Bragg, 2019; Koppeschaar et al., 2019; Michels, 2016).

Reporting entities usually disclose certain items of material importance in the audited accounts and reports as notes. The Note to the Main Statements is additional information in the annual financial reports (Koppeschaar et al., 2019; Oladele et al., 2018). Specifically, CAMA 2020 requires companies to provide supplementary information in the form of notes in the audited reports. CAMA 2020 states that "Any information required in the case of any company by the following provisions of this Part of this Schedule shall (if not given in the company's accounts) be given by way of a note to those accounts" (CAMA 2020, Part III, Section 35).

There are two divergent views on the presentation of the value of intellectual assets in the published reports. The first view holds that reporting entities should not recognise the value of human resources as assets. According to this method, the reporting entities should disclose the value in notes to the accounts or in a separate human resources report. Advocates of this view base their arguments on the limitations and problems associated with HR accounting. They believe that, by its nature, human resources information is suitable for disclosure only and not suited for recognition in statutory reports (Arkan, 2016; Petkov, 2010).

Advocates of disclosure of human resources value differ on how the presentation of HR value in the annual reports should be. One group of advocates believes that human assets' value and relevant information should be presented through disclosure as notes to the accounts in the financial reports (Petkov, 2010).

The second group believes that reporting entities should disclose the value of their human resources in a separate human resources statement (Wiyadi et al., 2021; Dey & Sarkar, 2015; Absar, 2014). The advocates of this view believe there should be a new statement to take care of human resources information within the financial reports (Sarkar, 2015; Absar, 2014). The advocates of this idea believe that presenting human resource values in a separate statement will help to preserve the accuracy of the other statements in the annual reports. The group further argues that this is necessary because there are no accurate and acceptable means of valuing human resources. Human resources have some unique qualities that make them different from all the other classes of assets (Wiyadi et al., 2021; Absar, 2014).

The third school of thought believes that the worth of human assets has to be recognised and presented as an intangible asset or a particular class of assets together with other assets (Asein et al., 2019; Oladele et al., 2018; Oko, 2018; Arkan, 2016; Adebawojo et al., 2015; Ezeagba, 2014; Okpala & Chidi, 2010). This school of thought believes that treating human assets in any other way apart from recognition, just like any other asset, will mean that reporting entities do not recognise investments in human resources as assets (Ezeagba, 2014; Okpala & Chidi, 2010). The argument of this school of thought has the backing of researchers on the disclosure and recognition of items on financial reports (Asein et al., 2019). For example, in a study on how investors consider information recognised against the items disclosed in the financial reports in their investment decisions, Michels (2016) argued that recognising the value of an item in the financial statements cannot be substituted with disclosure. Relying on FASB, Michels (2016) further asserts that this is the intention of the standard setters. Previous studies have shown that in making investment decisions, investors rely more on items recognised in the financial reports than those disclosed in the notes to the accounts.

Figure 1 shows the variations in opinions regarding how reporting entities should report the HR value in the financial report.

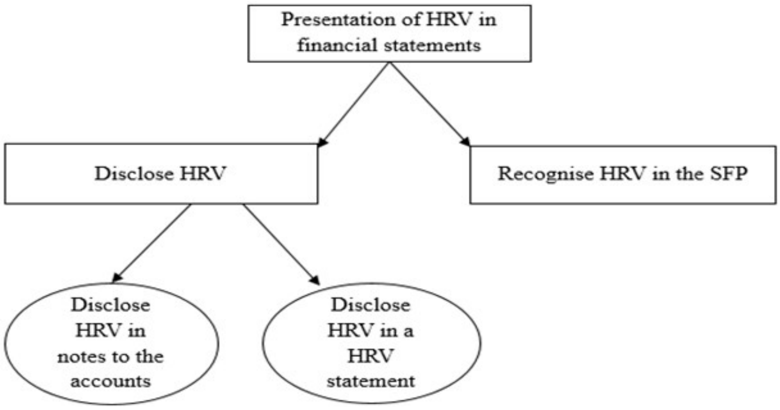

Figure 1: Differences in opinion about presentation of HR value in financial reports (The Researcher, 2021)

2.3.5 Human resources valuation and measurement issues

The historical cost concept is the basis of measurement and valuation in accounting (Elliot & Elliot, 2017; Scott, 2015; Godfrey et al., 2010). Elias (1972) argues that "accounting measurements in actual use rely heavily, if not solely, on historical costs" (p. 216). Although the historical cost concept remains the primary concept for valuation in accounting, development in accounting has led to the acceptance of alternative forms of cost attachment. Apart from the historical cost, other cost concepts are also allowed. Elliott and Elliott (2017) posited that "measurement requires elements to be reported in monetary amounts. The Framework recognises that elements are reported using a variety of bases which include historical cost, current cost, net realisable value and present value" (P. 164).

One of the areas in the field of HR accounting that attracts the attention of researchers due to the challenges it poses is the issue of the valuation model (Arkan, 2016; Monday, 2017; Steen & Welch, 2011). Researchers over the years have developed several models to address this challenging aspect of HR accounting (Inua, 2018; Arkan, 2016; Islam & Sarker, 2016). However, so far, none of these models has been accepted by all the stakeholders in financial reporting. The reason for not adopting any of the models is that none of these models is without limitations (Arkan, 2016; Islam & Sarker, 2016).

A review of the classification of the human resources valuation models indicates the existence of conflicting understanding among researchers. For example, Oko (2018), Okoye et al. (2017), Gupta (2016), Oluwatoyin (2014), and Rahaman et al. (2013) classified human resources valuation models into two: cost-based and economic value-based. On the other hand, Arkan (2016) classified human resources valuation models into three (economic models, costapproach models, and multiplier models). Akintoye et al. (2015) classified the models into three categories: cost-based, monetary-based, and non-monetary-based. Sharma and Lama (2014) classified the models into three (monetary, non-monetary, and contribution-based models). It is worthy to note that although Arkan (2016), Akintoye et al. (2015), and Sharma and Lama (2014) all classified the models into three, each of the classifications is different. The differences in the categorisation of the human resources valuation models could be due to the “conflicting conceptualizations” Steen (2011, p. 299) observed.

A critical review of these models reveals that the valuation models developed by researchers so far fall into two categories: monetary valuation models and non-monetary valuation models (Shukuhian & Ashraf, 2019; Kashive, 2013). There are two monetary models: cost-based and economic value models. Figure 2 shows this classification.

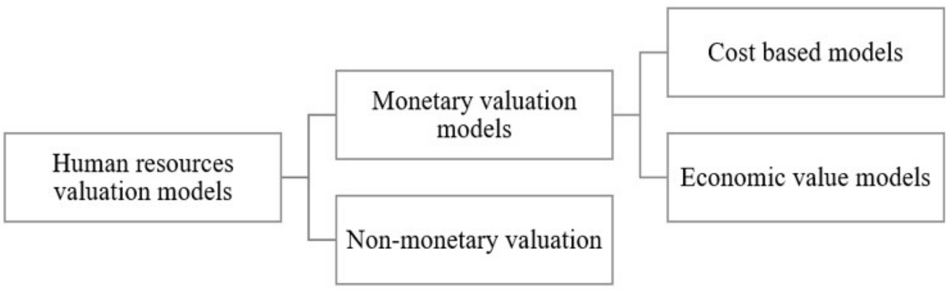

Figure 2: Classifications of human resources valuation models (Researcher, 2021)

2.3.5.1 Monetary value models

Researchers developed the monetary models of human resources valuation to assign a monetary value to the human assets of a reporting entity (Shukuhian & Ashraf, 2019).

According to Sirisetti and Mallesu (2012), the major models of human asset valuation are the "historical cost, replacement cost, standard cost, present value of future earnings, and expected realizable value" (p. 50). All these models are monetary models.

According to Bullen and Eyler (2008), reporting entities can value their human resources at either cost or value. Based on this argument, a monetary valuation model can either be costbased or economic value-based (Okoye et al., 2017; Okafor, 2009).

(1) Cost-based models

The cost-based models are human resource valuation models with roots in accounting or economic cost concepts (Shukuhian & Ashraf, 2019; Kashive, 2013). Generally, accounting costs are of two types. The first type is the cost incurred to acquire an asset that will help the firm achieve its objectives in the future. Reporting entities capitalise, depreciate or amortise the cost of their assets over the periods the assets provide benefits to the reporting entities. Each year, reporting entities march the amount of deprecation or amortisation against the revenues for the period. (IASB, 2018). The second class of costs comprises expenses. Reporting entities do not expect to benefit in the future from items classed as expenses. Reporting entities expense them annually as they incur the expenses (Amahalu, Abiahu, Obi & Okika, 2016). Therefore, the costs that form the basis of monetary models can be historical, notional, or standard costs. The following sections discuss some of the most prominent cost-based models.

i. Historical cost models

The historical cost accounting concept underpins these models (Monday, 2017; Arkan, 2016; Sharma & Shukla, 2010). Historical cost is one of the basic concepts of accounting, which requires reporting entities to value their assets using the acquisition costs, that is, the price paid to acquire and put them to use (IASB, 2018). One of the advantages of using historical costs in valuation is that the cost is constant, and reporting entities can easily substantiate it at any time.

Another advantage of the historical cost approach is that it is a widely accepted means of valuation and recording financial transactions (Akintoye et al., 2018). It is the preferred method of valuing assets under generally accepted concepts and conventions. It is also the method of valuing and recording property, plants, and equipment under IFRS (IASB, 2018). Management, financial report readers, and other stakeholders can easily understand historical costs (Arkan, 2016).

The disadvantages of the historical cost method are that it relies on obsolete data, which may not be a reflection of reality at certain times, and it may not necessarily represent the fair value of the transaction (Arkan, 2016; Mondat, 2017). This problem is exacerbated in an inflationary period or during deflation. These lapses led to the development of the notions of depreciation, amortisation, impairment, and revaluation of assets originally valued using the historical cost concept.

Using the historical cost concept as a basis, researchers developed a valuation model for human assets known as the historical cost model or capitalisation of the historical cost model. (Akintoye et al., 2018). According to this method of valuing human assets, all costs associated with employment and making an employee ready to start work, such as recruitment costs and training and development costs, are capitalised as assets and are then annually amortised through the service period of the employee (Arkan, 2016; Stanko et al., 2014). The unamortised portion of the capitalised cost at the end of a fiscal period represents the employee's worth. The aggregate of all the employees' unamortised value represents the value of the human resources of that firm (Stanko et al., 2014).

This model's advantages and strengths align with the historical cost principle's general advantages and strengths. The model is not complicated and is easy to adopt by almost any reporting entity. Due to its similarities with the accepted method of accounting for assets, it is more popular (Arkan, 2016). Additionally, diverse individuals and interest groups can easily understand the historical cost method. The model also complies with general accounting principles on treating assets and liabilities (IASB, 2018).

The historical cost model inherits all the limitations of the historical cost principle. One of its limitations is that it relies on the amount spent by an organisation to acquire the services of a staff member. It disregards the value of future services and innovation that the employee can bring to the organisation (Ibarra & Cosico, 2016).

Another limitation of the historical cost model is that calculating the amount to be amortised is difficult due to the uncertainty surrounding determining the possible years of service of an employee (Stanko et al., 2014). Another limitation of the historical cost method is amortisation, which makes it possible for the value of an employee to fall to zero due to amortisation while the firm employs the employee. The value of an employee may fall to zero when an employee exceeds the expected service years attributed to him or her unless there is an adjustment in the amortisation base (Ibarra & Cosico, 2016). Having employees with zero value indicates a lack of connection between the actual value of the employee to the firm and his book value. In addition, an employee may undergo training or a learning process as part of personal development. The cost of such training and development will not be considered in valuing the employee, even though the training may favour the employee's performance while working for the organisation. Figure 3 shows the model of historical cost.

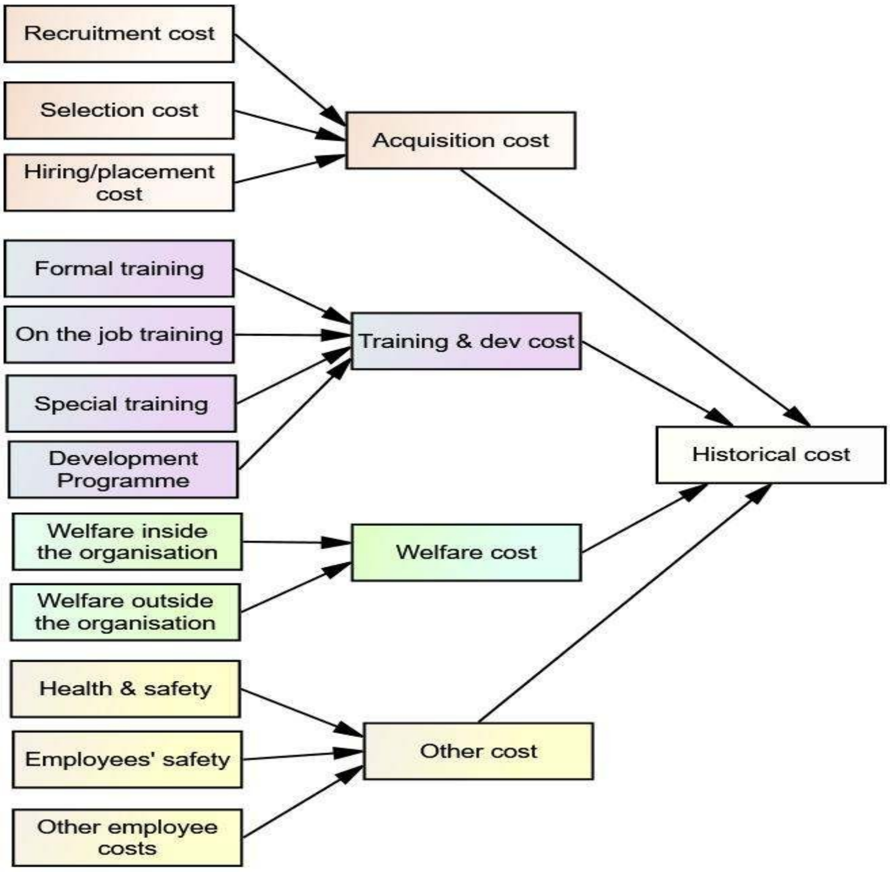

Figure 3: The historical cost valuation model (adapted from Ibarra & Cosico, 2016)

ii. The replacement-cost models

The concept of replacement cost is the basis of the replacement cost approach. The model considers the sacrifices an organisation must make in order to replace existing employees (Arkan, 2016; Sirisetti & Mallesu, 2012). This type of cost is a notional cost.

The replacement-cost model sees the value of human resources as equal to the amount a firm will spend to replace a particular human resource with another with the same level of competence, skills, and experience (Ibarra & Cosico, 2016). The model, therefore, considers recruitment costs, hiring and placement costs, and the training and development costs that will bring the replacement up to the present level of competence and efficiency of the employee to be replaced (Stanko et al., 2014). Supporters of this model argue for two types of replacement: individual replacement and positional replacement (Arkan, 2016; Stanko et al., 2014; Sirisetti

& Mallesu, 2012). The first concept applies where the aim is to replace an individual employee with another person with the same level of experience and competence. The second concept applies where an organisation is to replace the set of services an employee provides at a particular level with another set of services (Parameswaran & Jothi, 2005).

One of the advantages of this model is that it advocates the use of current costs rather than historical costs. It indicates to the firm what it may have to incur if it were to replace one or all of its employees now. In addition, this represents the current value of the employees (Ibarra & Cosico, 2016). Another advantage of this method is that the total value of the employees presented in the financial reports is the current worth of the employees (human asset).

The replacement value method also has some limitations (Stanko et al., 2014). One of the limitations is that it is contrary to conventional accounting; it does not conform to accounting principles and practice (Arkan, 2016). When it comes to replacement, not all assets have substitutes. Another limitation of this method is its subjectivity. Therefore, a particular item may have different values. Figure 4 shows the model of replacement cost valuation.

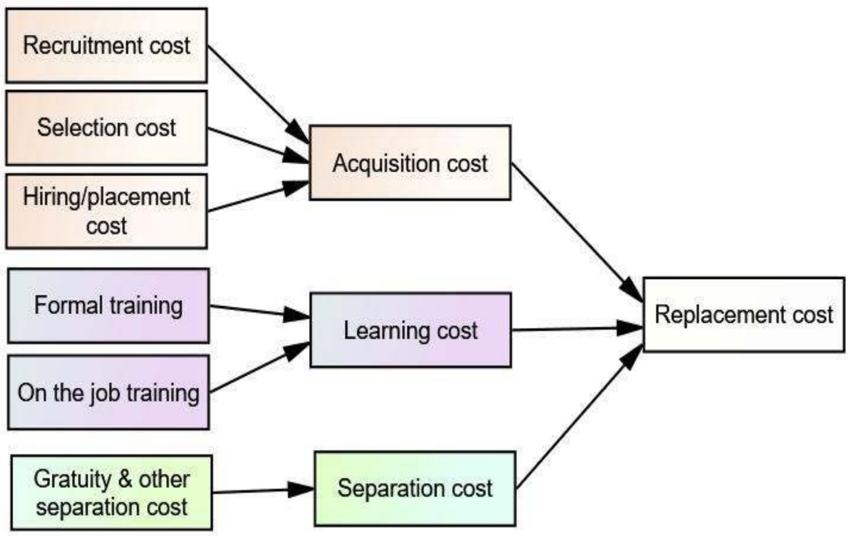

Figure 4: Replacement cost human resources valuation model
(adapted from Ibarra & Cosico, 2016)

iii. Standard cost model

An organisation using the standard cost method sets a pre-determined cost for recruiting, training and developing each category or group of employees. The pre-determined cost is the standard cost. The organisation then compares the standard with the cost of recruiting, training and developing an employee. The organisation transfers the variance (difference) between the standard and the actual to the income statement (Atul & Preeti, 2019).

iv. Opportunity cost model

Another name for this is the “Market Value Method and Hekimian and Jones model” (Arkan, 2016, p. 184). The economic concept of opportunity cost is the basis of this approach. In this approach, the value of an employee is determined by their worth in an alternative place of employment. The value of an employee depends on the offer made or expected to be made to the employee by others who want his services (Stanko et al., 2014). In the opportunity cost model, only the scarce employees have value. Therefore, the total worth of an organisation's human resources is the total worth of its scarce human assets. Using this method, employees who are not scarce have no value and do not contribute to determining the total value of the organisation's employees (Arkan, 2016; Sirisetti & Mallesu, 2012).

The downside of the opportunity cost method is that it neglects the value of workers whose demand is not high and, therefore, they are not scarce, even though they contribute to the operations of the organisation (Arkan, 2016). Excluding some employees from the valuation because they have no opportunity cost could negatively affect their motivation and morale. Furthermore, the bid price of an employee may not reflect his actual value to the firm because he may not be helpful in the department or section bidding for him, and therefore the bid price may be low and misleading, resulting in an inaccurate valuation (Arkan, 2016; Sirisetti & Mallesu, 2012).

(2) Economic value models

The economic models for valuing human resources are those models and methods that rely on the expected economic worth of human assets. Parameswaran and Jothi (2005) describe economic value as the "appropriately discounted amount of net cash inflows generated by the human resources of a firm over their economic service lives" (p. 873). Parameswaran and Jothi (2005) further assert that some writers refer to this model as the "present value approach" (p. 873) to measuring the value of human resources, and others include the opportunity cost approach as one of the economic value models. Assumptions, predictions, and mathematical equations support most economic value models (Monday, 2017; Arkan, 2016; Sharma & Shukla, 2010). The following paragraphs contain reviews of popular value models.

i. The Discounted future earning model

Another name for this model is the "Lev and Schwartz model," after the authors who developed it. Another name for this model is the "present value of discounted future earnings" (Arkan, 2016, p. 184). The model discounts the future earnings of the employees to a present value, which represents the value of the human assets. The employees are categorised based on age or skill. Then estimates of the expected future earnings of each group are made. The company then applies its rate of cost of capital as the discounting factor to discount the total estimated future earnings of the employees. Figure 5 shows the stages for determining the value of human assets using the discounted value model.

This model has some noticeable limitations. One of these limitations is its reliance on future salary (earnings) to determine human resources value. Salaries and other employment benefits are not necessarily measures of productivity. Additionally, both micro and macro-economic variables affect salaries. Therefore, it is not static; it changes with changes in the economy, political environment, and even organisational policies. The salary may increase, for instance, due to promotion or performance, or decrease when a firm faces financial difficulties or disciplinary action against an employee (Monday, 2017; Arkan, 2016; Sharma & Shukla, 2010). It is also worth noting that some employees may decide to work in certain positions regardless of the salary. Therefore, future earnings may not be a good yardstick for measuring the worth of employees. This is particularly so because estimating the future earnings of an employee with certainty and accuracy using this method is not easy.

Another factor considered in this model is the employees' retirement age and service life. Even though their retirement age may be known, some employees may leave the company before reaching retirement age or expected service life. This uncertainty adds to the limitations of this model. By implication, the model does not contemplate possible career changes (change of cadre) within an organisation.

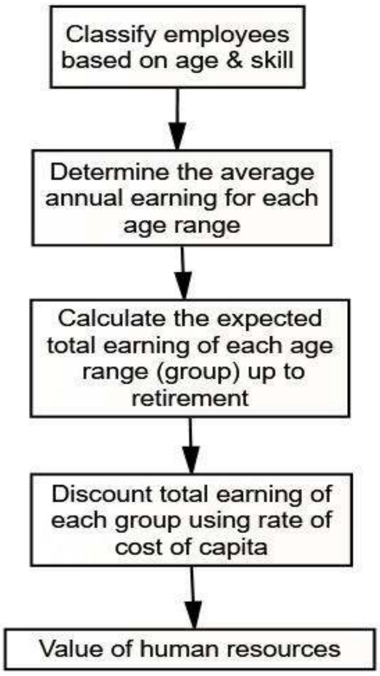

Figure 5: Stages in valuing human resources using the present value of discounted earnings (Researcher, 2021)

ii. Stochastic model

Other names for this model are the Flamholtz model and the “future rewards valuation model” (Arkan, 2016, p. 186). In this model, Flamholtz introduced some improvements to the “present value of discounted future earnings" model by recognising the possibility of career changes by employees within the organisation and leaving the organisation before reaching retirement age or completing service years (Arkan, 2016, p. 184). The model for evaluating human resources uses the assumption of employees' expected net realisable value. Another assumption of this model is that there is no linkage between the amount spent to hire and develop the skills and knowledge and the value of the employee to the organisation (Shukuhian & Ashraf, 2019). Figure 6 shows the six stages of calculating the worth of human assets using the model.

The model is affected by most of the limitations of the "discounted future earnings model". Furthermore, it is near impossible to predict the exact time an employee will stay in one cadre before moving to another or the time he will continue to work for the organisation.

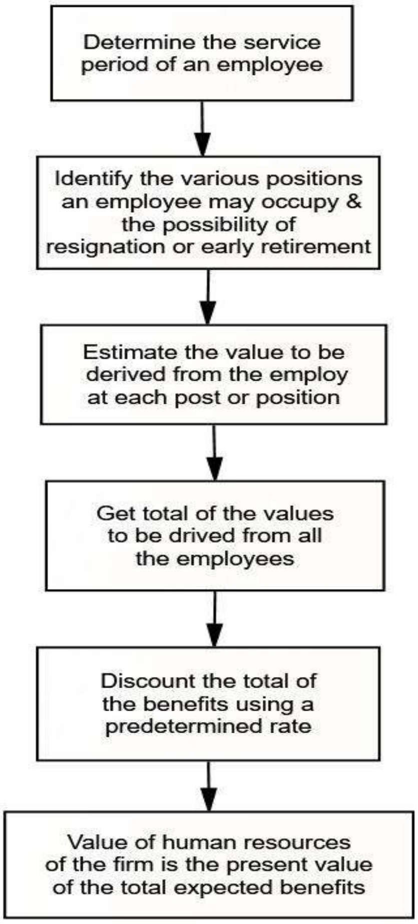

Figure 6: Human resources valuation process using Flamholtz Stochastic model

iii. Net benefit model

This approach is known as the “Morse model” after the authors who developed it. The model values human resources based on the net benefit a firm expects to derive from the services of its employees and a discount factor (Arkan, 2016). The present worth of the net benefits represents the value of human assets. Like other valuation models in this category, the “Morse model” is also affected by assumptions and predictions which may or may not materialise. Estimating the future benefits and costs of human resources cannot be done with certainty using this model.

iv. The net benefit with certainty factor model

This model is a modification of the present value of the net benefits model. This approach is also known as the “Ogan model,” after the author who developed the model. The model tries to address the uncertainty attached to the estimation of the future net benefits of employees by adding a certainty factor in determining human resources value.

v. Historical cost adjusted with discounted present value (Arkan model)

Arkan (2016) developed this model. The Arkan model incorporates both cost-based and economic value-based models. That is the historical cost model with the present value models. The model considers the possibility of extraordinary earnings and the expected service period of the employee, as well as the fact that resignation, sickness, or death may interrupt the service period.

Although the Arkan model takes into account the historical cost, it adds to the complexities of the existing models by incorporating estimates based on probabilities and mathematical calculations. The method deviates from the historical cost concept by adding future values, which may or may not hold. As argued by Arkan (2016), it is necessary to base a model “on a measure for which enough data is available” (p. 190). The Arkan model negates this argument by trying to estimate the possibility of workers retiring early, the occurrence of accidents, and future extraordinary earnings. These statistics are complicated to generate with high precision and certainty. Furthermore, such data may not be readily available in many developing countries like Nigeria.

vi. Unpurchased goodwill model

The 'Hermason's unpurchased goodwill model' is premised on the assumption that supernormal profit is the result of the existence of assets not shown on the firm's balance sheet. The most noticeable asset not disclosed is, of course, the human assets.

2.3.5.2 Non-monetary models

These models try to determine the worth of HR by using yardsticks of measurement other than money (Arkan, 2016). These models make use of rating scales, index numbers, and rankings.

Non-monetary models are simply inventories of the employee's capabilities, skills, qualifications, attitudes, and competencies (Jesuwunmi et al., 2017; Arkan, 2016; Tubey et al., 2015).

In accessing human resources, non-monetary models look at human resources from four angles. The method tries to form an inventory of an employee's educational and professional qualifications, knowledge, skills, and experience (Jesuwunmi et al., 2017; Arkan, 2016; Tubey et al., 2015). The method establishes measures of performance evaluation such as rating scales and rankings. These measures are used to evaluate specific characteristics of an employee, such as knowledge and interpersonal skills. Assessment of the potential of an employee for development and promotion is done through trait analysis (Jesuwunmi et al., 2017; Arkan, 2016). Attitude measurements assess workers' attitudes towards job satisfaction, including working conditions, rewards, and motivation. These models also use behavioural measuring tools to quantify the economic benefits that may accrue from the employees of a firm (Parameswaran & Jothi, 2005).

Non-monetary models of valuation are not suitable for the determination of human asset worth, which will be recognised on the balance sheet for financial reporting (Jesuwunmi et al., 2017; Arkan, 2016; Tubey et al., 2015). This is because the valuation is not in money terms. Although, on their own, the non-monetary models are not suitable for valuing human resources for possible inclusion on the balance sheet, the non-monetary models are suitable for internal reporting. They can support management decisions (Ishola et al., 2015). Additionally, the result of valuation using these models can be included as a note or separate human resources statement in the annual reports (Jesuwunmi et al., 2017; Arkan, 2016; Tubey et al., 2015). Some of the models that fall into this classification are Likert's causal, intervening, and result models; the Chakraborthy model; and the Jaggi and Lau model (Ishola et al., 2015).

2.3.6 Challenges and criticism of human resource accounting

The notion of HR accounting is undoubtedly one of the most controversial and challenging concepts in accounting today (Bonsu et al., 2019). Despite the efforts of researchers to finetune it for better acceptance, the concept is still under criticism and has been challenged by those who hold a contrary view. Over the years, researchers have identified several obstacles and criticisms against HR accounting (Bonsu et al., 2019; Monday, 2017; Islam & Sarker, 2016; Okpala & Chidi, 2010). For instance, Okpala and Chidi (2010) identify a lack of measurement standards that are generally accepted as the main problem in HR accounting. Okpala and Chidi (2010) identified another problem: the fear that management may use HR accounting practices to manipulate financial statements.

Sirisetti and Mallesu (2012) aver that the operational problems that exist in HR accounting are because it tries to measure intangibles, and measuring the intangibles calls for assumptions and subjectivity. Sirisetti and Mallesu (2012) further identify the problems with HR accounting, including the lack of a standardised accounting practice for measuring the value of human assets. Another problem Sirisetti and Mallesu (2012) identify is the assumptions in many valuation models that employees will remain in the service of a firm for an estimated period. Sirisetti and Mallesu (2012) contend that that is not feasible in today's world characterised by the high mobility of human resources. Sirisetti and Mallesu (2012) also argue that there is the possibility of dehumanisation in the workplace where human resources valuation is not done correctly or due to misuse of the value. Sirisetti and Mallesu (2012) express fears that the labour union may oppose the use of HR accounting. Although Sirisetti and Mallesu (2012) opine that most of the problems they identify are operational and attitudinal, which can be addressed through the development of a "suitable organisational climate and culture" (p. 52), these problems persist.

Research has identified many obstacles militating against the development of HR accounting. For instance, Okeke (2016), Sharma and Lama (2014), and Sirisetti and Mallesu (2012) all noted some of the obstacles to HR accounting. Reviewing the literature on HR accounting, Oluwatoyin (2014) found several obstacles to adopting HR accounting identified by other researchers. One of these obstacles is the lack of standard procedure for valuing human resources, and the methods developed so far have several lapses. This is made worse due to the absence of accounting standards and regulations on HR accounting (Okeke, 2016; Sharma & Lama, 2014; Sirisetti & Mallesu, 2012).

Another problem is the uncertainty in the determination of the service years of an employee. This affects the stability and reliability of the measurement tools (Sirisetti & Mallesu, 2012). The lack of sufficient empirical evidence to prove that HR accounting facilitates the management of human resources is also an impediment to the acceptance of HR accounting. There are also problems associated with ownership of human assets, which are made worse by the high mobility of human resources. Human assets are unlike physical assets, which can be owned and utilised similarly (Sharma & Lama, 2014). Sirisetti and Mallesu (2012) posit that there is also the fear of opposition from the labour union. Labour unions may agitate for rewards or compensation equivalent to the individual value of the employees. Another critical limitation to the benefits of HR accounting is that the existing taxation legislation does not regard human resources as assets (Sharma & Lama, 2014). This may lead to disputes with tax authorities.

Other obstacles associated with HR accounting include the low level of awareness about HR accounting among stakeholders (Ibarra & Cosico, 2016); the dynamic nature of some industries, making adoption and implementation of HR accounting difficult; and the uncertainty attached to the determination of the contribution of an employee (Okeke, 2016). There is also the existence of exogenous factors that have effects on employees, and their rewards affect the valuation of human resources. Factors like government policies on employment, salaries, and wages are outside the firm's control, and some of such factors may be difficult to predict or control.

Arkan (2016) identified most of the challenges and concerns of professional accountants and researchers as highlighted above. Arkan (2016) believes that confidentiality related to individual employees' records will hinder some organisations from including certain information as part of external reporting. There is also the problem of a lack of time and resources to be devoted to human resource valuation by human resources managers and accountants. Arkan (2016) further asserts that companies do not take the problem of measuring human resources as a priority.

From the discussion above, the most critical challenges of HR accounting noted in the literature are the absence of an acceptable, reliable, and standardised model of valuation and practices. These problems can be addressed by developing an acceptable valuation model, issuing accounting standards to regulate and guide the adoption of HR accounting, and amending some laws, particularly taxation laws and the CAMA, 2020.

2.4 Concept of Financial Reporting

Financial reporting entails capturing financial data following applicable accounting rules. Flamholtz and Hua (2015) describe FR as the result of accounting. The essence of FR is to provide reliable information to stakeholders to make an informed decision (Muttakin et al., 2020). Oko (2018) posits that FR is the means through which corporate entities communicate with their stakeholders about their "operational performance in terms of profitability, efficiency, and responsibility as well as financial position" (p. 1704). To ensure adequate provision of accounting information to stakeholders, the IASB issued its "conceptual framework" in 2018. The "objective of financial reporting is to provide financial information that is useful to users in making decisions" (Kaawaase et al., 2021, P. 348). FR provides the needed accounting information via the financial reports, which comprise "Statement of financial position, Statement of comprehensive income, Statement of cash flow, Statement of changes in equity, notes to financial related explanations...." (Odunayo & Festus, 2020, p. 179).

FR is highly regulated using accounting concepts, conventions, standards, rules, and legislations, as many stakeholders rely on it for decision-making (Mahmoud, 2017). Muttakin et al. (2020) posit that "financial reporting, as a regulated practice, continues as a primary channel of communication between the firm and the market…" (p. 518). All the regulations are put in place to produce high-quality financial reports. The field of FR has drawn the attention of many stakeholders due to the corporate failures experienced in many countries as a result of "improper, false and misleading financial reporting in firms which hitherto had enjoyed good reputation..." (Mahmoud, 2017, p. 151). These incidences have brought out the importance of FR quality.

FR quality promotes the achievement of the objectives of FR and ensures that the stakeholders get the necessary information they deserve from reporting entities. According to Higson (2016), FR quality encompasses the disclosure of linked accounting information about a reporting entity to its various stakeholders. Mahmoud (2017) describes FR quality as the "determinant of value relevance of accounting information" (p. 153). Muttakin et al. (2020) assert that previous studies have proven that FR quality reduces information asymmetry. Irwandi and Pamungkas (2020) also observe that FR quality "reduces information asymmetry between the principal and agent in accordance with the company's legal obligations" (p. 27). Furthermore, Kaawaase et al. (2021) argue that FR quality "is helpful in making decisions regarding resource allocation in the organization" (p. 348). Irwandi & Pamungkas (2020) maintain that FR quality is a "very complex issue in the manufacturing industry and a significant contributor to a company's finance" (p. 25).

As Mahmoud (2017) observes, the level of FR quality is somewhat low in Nigeria. The research further argues that the failure in FR quality and governance has negatively affected investment in the country. According to him, "the lack of effective FR quality corporate governance (CG) in Nigeria has worked to the detriment of shareholders and created a class of stakeholders who have lost interest in the system (Mahmoud, 2016, p. 152).

2.4.1 Elements of quality in financial reporting

The central premise of judging FR quality is connected to the faithfulness of the purposes and the quality of the information disclosed in the financial reports of reporting entities (IASB, 2018). These qualitative features facilitate judging the value of the financial reports, resulting in a high degree of quality. According to Herath and Albarq (2017), information in "financial reports must be faithfully represented, comparable, verifiable, timely, and understandable" in order to have good quality. As a result, the emphasis of the elements of FR is on having transparent financial reports and not providing users with deceptive and misleading financial reports, which will enhance precision and predictability and are excellent indications of FR quality (Herath & Albarq, 2017).

The literature, including IASB (2018) and Beest et al. (2009), shows generally accepted elements of a good quality FR. According to Aminu et al. (2022), based on the conceptual framework of FR, “a higher-quality financial report faithfully represents information that is relevant, reliable, comparable, understandable, and timely” (p. 138). These elements are among the accepted qualitative features of FR. The features are classified as fundamental qualitative and enhancing qualitative features of FR. The subsequent sub-sections provide a conceptual explanation of these features and underline their significance as qualitative features.

2.4.1.1 Relevance

Relevance is focused on the materiality and usefulness of accounting information. It makes information valuable. Relevant information can alter the decisions of users of accounting information. Accounting information's predictive and confirmatory aspects influence decisions (Herath & Albarqi, 2017). The usefulness of information is strongly dependent on its potential to convey forward-looking, non-financial information. Such information should give users fair value and feedback on how significant events affect the reporting entity (Mbobo & Ekpo, 2016).

Information has the characteristic of relevance if it affects the economic decisions of users. Furthermore, the relevant information is valuable and enables users to analyse, rectify, and validate present and prior occurrences (Herath & Albarqi, 2017). Information becomes relevant when it is made available to users before it loses its ability to influence the outcome of their decisions. Many prior studies have emphasised the relevance of financial reporting information in terms of its function in influencing user decisions, enhancing their skills, and improving decision-making (Al-Dmour et al., 2018).

2.4.1.2 Reliability

Another essential aspect of FR quality is reliability. Although the IASB (2018) framework does not mention it, reliability is an enhancing quality (Herath & Albarqi, 2017). The information must be reliable to be valid. Reliability is obtained when the information users rely on is devoid of bias and material errors. Other factors to consider when assessing information reliability include truthfulness and verifiability (Herath & Albarqi, 2017).

2.4.1.3 Faithful representation

The second essential feature of financial reporting is the accurate portrayal of information (IASB, 2018; Al-Dmour et al., 2018). Faithful representation indicates that the information accurately represents the material it purports to represent. For information to be regarded as truthfully portrayed, it must be complete, unbiased, and free of serious errors and mistakes. On the other hand, measuring mistakes may influence faithful representation (IASB, 2018). This is because these phenomena and transactions vary with time, so the financial reports must meticulously and precisely detail all of these occurrences and transactions (Al-Dmour et al., 2018).

2.4.1.4 Comparability

According to IASB (2018), comparability is another enhancing qualitative attribute that improves the usefulness of financial information. Comparability enables users to examine and contrast financial and economic data in a financial report (Mbobo & Ekpo, 2016). It also allows information users to compare financial reports. Users of information can compare information from a reporting entity's reports or reports with reports from other firms over time or with reports from other firms (Herath & Albarqi, 2017). A reporting entity should be consistent in implementing accounting policies, disclosing modifications to the policies, and highlighting the consequences to improve the comparability of information. In addition, using financial ratios helps increase comparability (Beest et al., 2009).

2.4.1.5 Understandability

Understandability is one of the enhancing attributes of FR (IASB, 2018). It refers to identifying, describing, categorising, and then clearly presenting financial information transactions (AlDmour et al., 2018). Effective communication leads to understanding, and the user of information determines whether the information is understandable. As a result, the greater the extent of understandability, the better the user understands the information in financial reports (Herath & Albarqi, 2017). For example, understandability can be maximised by adequately presenting and categorising facts in the FR, for example, using graphs, charts, and tables.

Simple presentations aid in the comprehension of technical concepts and jargon.

2.4.1.6 Timeliness

Timeliness is another enhancing element that improves financial information (Beest et al., 2009). The capacity to convey information to decision-makers in a timely way before the information loses its power to influence their decisions is referred to as timeliness (Mbobo & Ekpo, 2016).

2.4.2 Factors Influencing financial reporting quality

The importance of FR quality made researchers investigate the factors responsible for changes in the level of the quality. Previous studies have found many factors that affect FR quality. These factors include legislation, accounting standards, earnings management, managers' ideologies, accounting conservatism, corporate reputation, sharia law, corporate governance, corporate social responsibility, and HR accounting disclosure. Other factors affecting FR quality are taxation, political influence, information system and information technology, culture and business ethics; many studies on FR used these factors to measure the quality of FR (Can, 2021; Krishnan et al., 2020; Notbohm et al., 2019; Herath & Albarqi, 2017).

Studies on FR quality have shown that compliance with legislation leads to higher quality in FR. This is indicated by the higher FR quality achieved after the Sarbanes–Oxley Act (Krishnan et al., 2020; Notbohm et al., 2019). Nigeria also has legislation to help regulate FR (Aliu, 2019; Onyabe et al., 2018; Yahaya, 2011). Studies like Notbohm et al. (2019) and Can (2021) establish a connection between FR quality and compliance with accounting standards. For example, Can (2021) found that IFRS adoption has increased the FR quality of reporting entities "by decreasing the discretionary accruals and audit aggressiveness in the Muslim majority countries" (p. 18). Notbohm et al. (2019) found an association between management's ideologies and FR quality. Studies like Nikbakht and Khanbeigi (2018), Akeju and Babatunde (2017), and Onuorah and Imene (2016) have established a connection between various components of CGand FR quality. Can (2021) found that compliance with Sharia Law improves FR quality in Muslim-dominated nations. Some of the few studies on HR accounting disclosure, like Odunayo and Festus (2020) and Abubakar (2011), have reported that HR accounting information affects FR quality.

2.4.2.1 Corporate governance

CG is critical to guaranteeing the quality of financial reporting. The link between CG and FR quality has received considerable attention. Several studies have revealed various findings about the governance mechanism and how it positively and substantially affects firms' FR quality (Akeju & Babatunde, 2017; Herath & Albarqi, 2017). Influence from outside users, families, and investors mostly has a negative impact on FR quality. Nevertheless, government control is associated with high-level financial disclosure quality. Examining the impact of CG mechanisms on financial information quality demonstrates that CG impacts accounting quality (Mahboub, 2017; Herath & Albarqi, 2017). Many academic studies have found that organisations with excellent CG may provide high-quality financial reports (Herath & Albarqi, 2017; Chiang et al., 2015). According to the literature, ownership concentration reduces the inclination of managers to manipulate their revenues. Furthermore, managerial ownership and earnings management are inversely related; another study finds that managerial ownership does not diminish earnings management but affects FR quality (Herath & Albarqi, 2017).

2.4.2.2 Earnings management (earnings quality)

Investors and other users of financial reports want high-quality information, which may be obtained by having high-quality earnings, which is one of the most significant indicators of efficiency in the capital market. Earning quality is a company's capacity to create a possible framework for growth in earnings and its continuous realisation (Odunayo & Festus, 2020). Earnings quality is an essential consideration in assessing the financial well-being of reporting entities, and it signifies the reliability of reported earnings (Garcia-Lacalle & Torres, 2021; Herath & Albarqi, 2017). Furthermore, earnings quality is used to analyse the effects of "converting accounting standards, external audits, enforcement, and corporate governance, as well as the cost of capital" (Herath & Albarqi, 2017, p. 7).

Various indicators in the literature may be used to proxy earnings quality, including "persistence, predictability, smoothness, abnormal accruals, accrual quality, value relevance, timeliness, conservatism, and earnings variability" (Odunayo & Festus, 2020; Herath & Albarqi, 2017, p. 7). Other factors, like management incentives and regulatory measures, can impact. The greater an entity's involvement in earnings management, the weaker the entity's financial reporting quality (Notbohm et al., 2019). Earnings quality significantly impacts the decision-usefulness of information for decision-making. Focusing on accruals rather than managing profitability or cash flows has a negative impact since accruals are simpler to manipulate and less transparent to stakeholders than cash flows (Notbohm et al., 2019; Choi & Pae, 2011).

Earnings quality has a significant impact on the decision-usefulness of information. Choi and Pae (2011) state that securities analysts frequently use this component to analyse financial data to anticipate an entity's earnings and cash flows. Analysts projections frequently exhibit varying degrees of accuracy- the gap between the average of expected and actual results- and precision- the tightness of the forecasted range of results. As a result, great precision and accuracy should result in good accounting quality. Based on their projections, it is feasible to deduce the quality of information.

2.4.2.3 Accounting conservatism

Accounting conservatism incorporates economic losses into accounting earnings more quickly than economic gains (Al-Dmour et al. (2018). It is a cautious response to uncertainty that attempts to guarantee that the uncertainties and risks inherent in business circumstances are fully acknowledged. Accounting conservatism is an essential aspect of FR quality. Accounting conservatism reduces the ability of managers to distort earnings. While in many studies, it is regarded as a proxy for FR quality.

As noted in the two preceding sections, FR quality is important and delicate. It is essential because it affects the decisions of many decision-makers, including investors. It is delicate because it is affected by many factors. Researchers have conducted many studies and developed a diverse approach to determining the quality of FR. Several studies on FR used these factors to measure the quality of FR (Can, 2021; Herath & Albarqi, 2017). However, AlDmour et al. (2018) argue that “the most employed proxies of (FQR) in literature are: (i) Earnings quality; (ii) Accounting conservatism; and (iii) Accruals quality” (p. 4).

2.4.2.4 Accounting disclosure

According to Agyei-Mensah (2013), “financial information disclosure is defined as the release of information concerning the economic performance, position or prospects particularly as measured in monetary terms” (p. 271). Accounting disclosure forms a significant part of many financial reports. It provides financial and non-financial information to stakeholders and sheds more light on facts not adequately captured in the primary statements (Omoro, 2019). It is a means of enhancing transparency (Uyar et al., 2013). The disclosure provides information that cannot be presented through the income statements and balance sheets (IASB, 2016; Uyar et al., 2013). In recognition of the importance of disclosures, IAS 38 provides that facts relating to non-adjusting events should be disclosed.

Furthermore, reporting entities present some information to stakeholders through mandatory and voluntary disclosures (Uyar et al., 2013). Such information goes a long way in enhancing the value-relevance of accounting information, which is a significant determiner of the quality of FR (Uyar et al., 2013). In addition, Agyei-Mensah (2013) posits that good quality accounting disclosure enhances "the efficiency of the stock market" (p. 271). Therefore, accounting disclosure is an avenue through which reporting entities can conveniently satisfy the informational needs of their diverse stakeholders, thereby conforming to the postulations of the stakeholder theory.

Inadequate and scanty disclosure practices are detrimental to reporting entities. Uyar et al. (2013) observe that reporting entities reduce information asymmetry through disclosure and give legitimacy to their operations. Uyar et al. (2013) further noted that "inadequate disclosures in annual reports are likely to cause fluctuations in the share prices since investment decisions are based on less objective measures in the absence of sufficient information" (p. 1082). Omoro (2019) recommends that reporting entities improve their voluntary disclosures to reduce the manipulation of accounting information and improve their FR quality.

Several studies investigated the influence of accounting disclosures on FR quality. For instance, Fakoya and Lawal (2020) investigated how environmental accounting affects the quality of disclosure of accounting information among shipping companies in Nigeria. In another study, Garcia-Lacalle and Torres (2021) investigated the relationship between online disclosure and the FR quality of government agencies in Spain. Souza et al. (2019) examined how sustainability disclosures relate to FR quality in Brazil. Omoro (2019) studied how voluntary disclosure impacts the FR quality of state-owned commercial corporations in Kenya. Kuar et al. (2016) also studied the interactions between human resources disclosures and corporate characteristics. Abubakar (2011) also studied the impact of HR accounting disclosers in FR. Odunayo and Festus (2020) researched how HR accounting disclosure influences the FR quality of oil and gas firms in Nigeria. All these studies have shown that accounting disclosure influences FR quality.

All the above studies found evidence that suggests that accounting disclosures constitute a significant determinant of FR quality. Among the various accounting disclosures, HR accounting disclosures are among the least studied by researchers. Odunayo and Festus (2020) and Abubakar (2011) are the few studies on HR accounting and FR quality. Odunayo and Festus (2020) studied how HR accounting influences the FR quality of twelve oil and gas companies in Nigeria. The study found that HR accounting is a significant determiner of FR quality among the listed oil and gas companies.

2.5 Conceptual Framework of the Study

Section 2.5 of the thesis provides information on some critical conceptual definitions of some of the terms used in the study. The section makes it easy for the reader to understand these conceptual matters.

2.5.1 Valuation

Money measurement remains the key to accounting and valuation (Koppeschaar et al., 2019; Sadowska & Lulek, 2016). Al-Hanini (2018) describes measurement in accounting as “the process of evaluation the economic events resulting from a specific activity to which they are connected in the accounting unit” (p. 5). Furthermore, accounting measurement “presents the changes that accompanied those events and their effect on the income statements and the statement of financial position as well” (Al-Hanini, 2018, p. 5).

In contemporary accounting, the “concept of measurement and valuation” is “one of the most difficult issues” (Sadowska & Lulek, 2016, p. 252). Although some authors distinguished between measurement and valuation, in contemporary accounting, the two “terms are often used as synonyms” (Sadowska & Lulek, 2016). While trying to bring out the distinction between measurement and valuation, Sadowska and Lulek (2016) inferred that measurement is not restricted to attaching money value to an item; it also incorporates the use of other metrics. Conversely, valuation means assigning monetary value to an item, as “valuation without money is not possible” (Sadowska & Lulek, 2016, p. 252).

Measurement and valuation in accounting are done by attaching money value to the item being valued (Sadowska & Lulek, 2016). Elliott and Elliott (2017) posit that “measurement requires elements to be reported in monetary amounts. The Framework recognises that elements are reported using a variety of bases which include historical cost, current cost, net realisable value and present value” (P. 164). Therefore, Al Hanini (2018) explains that “accounting measurement is known as the quantification that includes processes of registration, tabulation and deportation and finally providing a summary of these processes in their final versions.” The author further explains that the “measurement covers all the accounting steps starting from recording and ending with the final calculations” (p. 4).

Accounting reports are based on parameters that are centred on monetary values. The “money measurement” concept in accounting demands that transactions be measured and recorded using monetary values (Atrill & McLaney, 2011, p. 54). Therefore, no transaction will be recorded in the accounting books without expressing it in monetary terms. Measurement and valuation issues in HR accounting have been critical issues in many prior studies. Inua (2018) posits that “early HRA research involved the continued development of concepts and models for measurement, valuation and accounting for human resource cost and value, with several models emerging" (p. 133). Inua (2018) further asserts that "each [valuation model] has its limitations and no one model has proved to be more valid than any other" (p. 133).

In this study, valuation refers to quantifying and assigning monetary value to an item or a transaction. Therefore, the valuation of human resources as used in this study refers to the process of assessing and attributing money value to human resources.

2.5.2 Recognition

Reporting entities present accounting information in their financial reports in either of two ways (Koppeschaar et al., 2019). One through the primary statements and the other through additional information. Elliot and Elliot (2017) explain this thus: "Annual reports consist of primary financial statements, additional disclosures and narrative" (p. 33).

The first means of presenting accounting facts in the annual reports is through recognition. Transactions are recognised in the financial statement if such transactions are reported in either of the two main statements, which comprise the income statement and the balance sheet (Elliot & Elliot, 2017; Atrill & McLaney, 2011). According to Atrill and McLaney (2011), the framework issued by the IASB "identifies the main elements of financial statements as assets, liabilities, equity, income and expense" (p. 167). Transactions resulting in the creation of any of the elements of financial statements are recognised in the financial statement after fulfilling relevant recognition criteria set out by IFRS (Elliot & Elliot, 2017).

According to Koppeschaar et al. (2019), the "accrual basis of accounting requires that entities recognise the elements of financial statements when they satisfy the definitions and recognition criteria in the Conceptual Framework" (p. 32). Koppeschaar et al. (2019) emphasise that the accrual basis of accounting "implies that transactions are accounted for when they occur, not when cash is received or paid" (p. 32). Elliot and Elliot (2017) maintain that recognition is determined by three criteria: relevance, faithful representation, and benefits of information over cost.

Therefore, the recognition of transactions or items should provide users of financial reports with the following three benefits: Firstly, the recognition should provide "relevant information about the asset or the liability and about any income, expenses or changes in equity" (Elliot & Elliot, 2017, p. 166). Secondly, the recognition should allow for "a faithful representation of the asset or the liability and any income, expenses or changes in equity" (Elliot & Elliot, 2017, p. 166). Thirdly, the information "results in benefits exceeding the cost of providing that information" (Elliot & Elliot, 2017, p. 166).

Generally, any item or transaction recognised as income or expenditure is reported through the income statement. In contrast, items or transactions recognised as assets or liabilities are reported on the balance sheet. In this study, the term "recognition" is used in reference to the treatment of the cost of investment in employees as assets and the reporting of the assets on the balance sheet.

2.5.3 Disclosure

Bragg (2018) maintains that accounting standards emphasise the concept of full disclosure, which requires entities to provide additional information in their financial reports. Bragg (2018) stresses that under the full disclosure concept, "one should include in or alongside the financial statements of a business all of the information that may impact a reader's understanding of those financial statements" (p. 28). Bragg (2018) also argues that "the accounting standards have greatly amplified upon this concept in specifying an enormous number of informational disclosures" (p. 28).

According to Koppeschaar et al. (2019), "information about assets, liabilities, equity, income and expenses is communicated through presentation and disclosure in the financial statements of a reporting entity" (p. 21). Therefore, disclosure is another means of presenting accounting information in the financial report (Elliott & Elliott, 2017). Disclosure involves reporting specific facts in the financial reports but not in the primary statements. As Elliott and Elliott (2017) put it, "the financial statements should include a set of disclosures, commonly called notes, that further clarify the contents of the information presented within the statements" (p. 52).

According to Dyana and Kesavan (2015), disclosure is "the process of providing information about items in the financial statements, via footnotes, supplementary schedules, or other means" (p. 1). In many instances, disclosure of accounting information is made through supplementary notes in the financial reports and other schedules. Notes to the financial reports offer further details that make the financial reports more comprehensive and provide other information that, based on conventional accounting principles, cannot be recognised in either the income statement or the balance sheet (Bragg, 2018).

Two disclosure forms can be observed in how reporting entities disclose additional information. They are financial disclosure and non-financial disclosure. Disclosure can also be classified into mandatory and non-mandatory disclosures (Elliott & Elliott, 2017; Dyana & Kesavan, 2015; Kashive, 2013). Financial disclosure involves the disclosure of information in financial terms, while non-financial disclosure involves the disclosure of the information using other metrics. Kashive (2013) p. 115 defines non-financial metrics as those "indices, scores, ratios, counts and all other information that is not accounted for in primary financial statements".

In some instances, accounting standards or statutes impose the duty to report additional details and relevant facts in the financial reports (Bragg, 2018; Koppeschaar et al., 2019; Elliott & Elliott, 2017; Kashive, 2013). This type of disclosure is termed "mandatory disclosure" because the reporting entity is expected to comply with the standards. Reporting entities sometimes go beyond the mandatory disclosure requirements to disclose more information independently (Kashive, 2013). Where an entity discloses more information than required by standards and statutes, such disclosures are voluntary or discretionary disclosures (Fakoya & Lawal, 2020).

In this study, the term disclose is used concerning human resources to refer to the concept of reporting the worth of investment in human assets in the notes to the financial reports or as additional schedules.

2.5.4 Human capital

Evidence from the literature suggests that the concept and the definition of human capital are diverse (Mara et al., 2016). Human capital is referred to by other names, such as human assets, human resources, and cultural capital (Mara et al., 2016; Malloch, 2013). Mara et al. (2016) argue that some of the definitions and concepts of human capital are elusive.

According to Malloch (2013), “the term 'human capital' first appeared in 1961 in an American Economic Review” (p. 2275). Malloch (2013) also observed that “economists have since loaded on much baggage to the concept, but most agree that human capital comprises skills, experience, and knowledge” (p. 2275). Chiswick (2013) defines human capital as “the ability of a corporation to attract, motivate, and retain a workforce that has the appropriate knowledge and skill base” (p. 241).

Green (2013) suggests that “the concept of human capital is closely linked to HRD [human resource development]. Human capital refers to the resources employees bring to the workplace in terms of their innate and learned skills and their attitudes” (p. 1373). According to Green (2013), examples of the skills and attitudes of the employees include “their intelligence, aptitudes, knowledge, and skills; their ability and willingness to learn; and their capacity for commitment to the organization” (p. 1373). Stanko et al. (2014) describe HC as something relating to “employees and the attributes that they bring to an organisation, such as education, training, experience, expertise, and flexibility, among many others” (p. 98).

According to the preceding definitions, human capital in this study refers to a firm's HR or human assets. Human capital is generally seen as a branch of intangible capital and a subset of intellectual capital (Janshanlo et al., 2019; Oko, 2018; Fulmer & Ployhart, 2014; Stanko et al., 2014; Kirfi & Abdullahi, 2012).

Intangible capital, also known as intangible assets, is so named due to its lack of physical form. (Bragg, 2018; Elliot & Elliot, 2014; Stanko et al., 2014). Generally, an intangible asset “lacks physical substance” (Bragg, 2018, p. 182). Intangible assets' lack of physical form makes them difficult to examine and value. According to Stanko et al. (2014), intangible assets are “nonmonetary assets that do not have a physical form. Such assets cannot be seen or touched and cannot be physically measured “(p. 98). The authors further explain that “Because they do not have physical substance, intangible assets are often difficult to measure and involve complex measurements and calculations” (p. 98).

Reflecting on the importance of intangibles in accounting and financial reporting, Bragg (2018) states, “depending on the circumstances, intangible assets can comprise a large part of the asset base of a business, and so deserve detailed attention from the accounting department to ensure that they are properly recognized” (p. 182). Stanko et al. (2014) capture the importance of intangible assets to a firm by stating that “intangible assets are held by a company to produce goods, to provide services, to rent or lease to other entities, and for administrative purposes” (p. 98). The recognition of the importance of intangibles led to the issuance of IAS 38 (Elliot & Elliot, 2014). Another author, Gupta (2013), puts the importance of intangible assets thus: “Increasingly, corporations are trading not on products or services but their reputations, brand value, goodwill, and intellectual capital. These are termed intangibles and have an actual numerical value on the company balance sheet” (p. 237).

Despite clear consensus on the nature and significance of intangible assets, there is a controversy as to whether human assets form part of a company's intangible assets (Oko, 2018; Fulmer & Ployhart, 2014; Anselmi & Bitetto, 2013). The accounting definition of intangible assets narrows the scope of the concept to exclude human capital from it (Janshanlo et al., 2019; Brigg, 2018). Unlike the definition of intangible assets in economics and other management sciences like HR management, accounting standards do not recognise human capital as part of a company's intangible assets (Bragg, 2018; Elliot & Elliot, 2014). The following paragraph contains the two distinct definitions of intangible assets.

Bragg (2018) defines intangible assets from the accounting point of view as an asset "that lacks physical substance, and from which an entity expects to generate economic returns for more than one accounting period" (p. 182). Elliot and Elliot (2014) explain that in accounting, "intangible assets are identifiable non-monetary assets that cannot be seen, touched or physically measured but are identifiable as a separate asset" (p. 465). In addition to these definitions, IAS 38 sets the recognition criteria for intangibles (Choi, 2003).

In accounting, before recognising an item as an intangible asset, the item has to satisfy the conditions stipulated by accounting standards for the recognition of assets (Janshanlo et al., 2019; Bragg, 2018; Elliot & Elliot, 2014). For an asset to be treated as an intangible asset, it must be identifiable, under the entity's control, and capable of giving future economic benefit to the entity; the potential future benefit is probable and can be credited to the item. The item's cost can be precisely estimated (Elliot & Elliot, 2014). Steen and Welch (2011) succinctly capture the accounting recognition criteria for intangible assets by IAS 38. Steen and Welch (2011) explain that before an item is treated as an intangible asset, the item must be "identifiable, controlled, it is probable that future benefits specifically attributable to the asset will flow to the enterprise, and cost can be readily measured" (p. 62). According to Steen and Welch (2011), IAS 38 "also requires the following items to be expensed: internally generated goodwill, start-up, pre-opening and pre-operating costs, staff training costs, advertising cost and relocation cost" (p. 62).

The above definitions and recognition criteria in IAS 38 prevent human capital from being recognised as an intangible asset in the financial statements. Stanko et al. (2014) argue that "because of their nature, intangible assets are often neglected or misrepresented in financial reporting" (p. 98). Oko (2018) captures the current accounting practice of excluding human capital from the intangible assets to be presented in the financial reports thus: "Currently, this most important asset is not being accounted for or disclosed in organizations' statement of financial position like other physical assets and intangible assets" (p. 1703). This is even though these assets have value. According to Fulmer and Ployhart (2014), "the fact that financial reporting rules preclude the recognition of most intangible assets (including human resources) on corporate balance sheets does not mean that they actually have zero value as resources" (p. 173). Today, human assets are not recognised as assets in the annual reports in compliance with the provisions of IAS 38 (Kirfi & Abdullahi, 2012; Oko, 2018; Asein et al., 2019; Janshanlo et al., 2019).

Not all authors in accounting agree that the provisions of IAS 38 exclude human capital from being recognised as an intangible asset. Authors like Asein et al. (2019) and Jaarat (2013) believe that the provisions of IAS 38 can accommodate human assets. Asein et al. (2019) hold that "human capital satisfies the criteria of identifiability and control by an entity set by IAS 38 for Intangible Assets..." (P. 287). Asein et al. (2019) recommend "that standard setters and policymakers should commence the process that will lead to the recognition of human capital on the balance sheet" (p. 287).

For example, outside the field of accounting, in economics and HR management, human resources have always been categorised as part of an entity's intangible assets (Fulmer & Ployhart, 2014). For instance, Anselmi and Bitetto (2013) describe intangible assets thus:

“Intangibles are things that are difficult to quantify in monetary terms but are obvious – and quite often central – part of the production phenomenon” (P. 1389). According to Anselmi and Bitetto (2013), “A textbook case is the intellectual capital embodied in the minds and bodies of the employees of an organization” (p. 1389). Intellectual capital is a sub-classification of intangible capital within which human capital is a component (Steen & Welch, 2011).

Sometimes the concepts of intangible assets and intellectual capital are used interchangeably, as observed by Sherif and Elsayed (2015). Sherif and Elsayed (2015) observed that “the concepts of IC and intangible assets are used interchangeably in literature as the IC studies encompass multi-disciplines such as human resource management, strategic management, finance and economics” (p. 5). Another complexity surrounding the two concepts is that some authors, like Stanko et al. (2014), classify HC as a direct subcategory of intangible assets. Stanko et al. (2014) assert that “within intangible assets, subsets have been identified—human capital and structural capital...” (p. 98). On the other hand, authors like Steen and Welch (2011) and Abhayawansa and Abeysekera (2008) classify HC as a subcategory of intellectual capital and then place intellectual capital as the direct subset of intangible assets.

In a diagram showing the breakdown of tangible and intangible assets, Stanko et al. (2014) identify HC and structural capital as the two direct components of intangible assets. On the other hand, the majority of scholars, for example, Steen and Welch (2011), classify HC as a part of the three components that form intellectual capital. Abhayawansa and Abeysekera (2008) capture the linkages between intangible assets, intellectual capital, and human capital as derived from the literature. Abhayawansa and Abeysekera (2008) state that “the accounting literature identifies these intangible value drivers as intellectual capital (IC). Human capital is an important element of IC, driving value creation in the new economy and especially in knowledge-intensive companies” (p. 51). Other scholars who classify HC as a component of

IC include Flamholtz et al. (2020), Ogbodo and Egbunike (2016), Ramat and Noah (2013), and Steen and Welch (2011).

According to Steen and Welch (2011), “intellectual capital has been defined as 'the sum of human capital and intellectual property.” (p. 60). Ramat and Noah (2013) describe intellectual capital as the “knowledge asset” of an organisation, which includes “employee (human capital), process (structural capital) and customer relationship (relational capital)” p. (356).

The diagram below (Figure 7) shows the linkages among the different components of intangible assets.

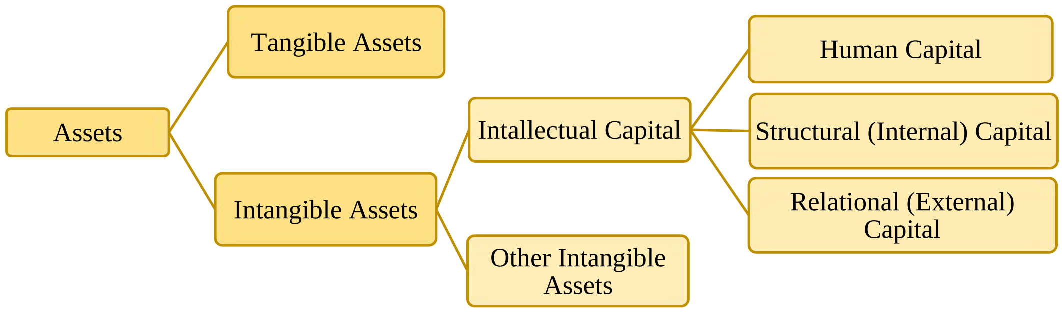

Figure 7: The linkages between human capital and other intangibles

Figure 7 shows the linkage between HC and other components of IC and intangible assets. It shows the two main classes of assets: tangible and intangible. Intangible assets are the broad classification for all assets with no physical (tangible) form. Intangibles have two main classifications: intellectual capital and other intangible capital. Intellectual capital comprises three components: human, structural, and relational capital (Flamholtz et al., 2020; Ogbodo & Egbunike, 2016; Ramat & Noah, 2013; Steen & Welch, 2011).

2.5.5 Financial Statements

Companies prepare different types of financial reports. These reports range from financial reports for internal use (management reports) to interim and annual reports. In Nigeria, the CAMA 2020 mandates each company to prepare and subject its financial reports to an external audit at the end of each accounting year. These reports go by many names. These names include annual reports, annual financial reports, audited financial statements; audited accounts; and financial statements. In this study, the term “financial statement” means the audited annual financial reports produced in conformity with accounting principles, standards, and legislation.

IFRS and CAMA 2020 generally regulate the production and content of annual reports in Nigeria (Aliu, 2019; Jayeoba et al., 2016; Ranti, 2011). Brigg (2019) and Elliot and Elliot (2017) highlight the contents of annual reports. Elliot and Elliot (2017) maintain that “the primary financial statements should be presented using standardised formats as prescribed by International Financial Reporting Standards” (p. 33). The primary statements are: “a statement of income; a statement of other comprehensive income; a statement of changes in equity; a statement of financial position; a statement of cash flows; explanatory notes to the accounts” (Brigg, 2019; Elliot & Elliot, 2017, p. 33).

2.5.6 Companies

The research will focus on reporting entities listed on the NSE. The quoted companies in the NSE fall into eleven sectors, with each sector representing an industry. This research focuses on companies in the ten non-financial sectors. In the subsequent chapter, Chapter three (research methodology) discuss the reason for excluding financial companies from this research.

2.5.7 Conceptual model of the study

The main target of accounting is the production of reliable information for making informed investing, financing, and other decisions (Olsson, 2001). The annual financial reports remain the most prominent information product of the accounting system, which serves as a source of data and information for decision-makers. It will not be out of order to state that the quality and effectiveness of the decisions made based on information available in the annual reports depend, to a large extent, on the accuracy and completeness of the accounting system (Peter et al., 2018; Puspitawati & Anggadini, 2018). Given the status of human resources as portrayed by the resource-based view (RBV) theory and the human capital theory, such a level of accuracy and completeness may not be attainable without incorporating human capital into the annual financial reports. Therefore, incorporating HR accounting information into the financial statements will improve the FR quality. For HR accounting to be able to provide the desired results in terms of reliable information, the challenges facing it must be addressed through the establishment of a robust valuation method in line with the money measurement concept and established accounting standards and reporting framework backed by the theory of financial reporting (Arkan, 2016).

The conceptual framework of this study is predicated on the importance of having acceptable valuation methods for human assets and a reporting framework that will pave the way for the presentation of the values of human assets in the published financial statements. The concept of this research is that once researchers find solutions to the main obstacles confronting HR accounting and improve its ideas, full adoption of HR accounting can add to the completeness and reliability of the contents of the financial reports. Achieving this milestone will positively affect FR quality. An improvement in FR quality will significantly improve the quality of decision-making. Apart from providing information to incorporate into the financial statements, HR accounting information can be used directly by management and other stakeholders for decision-making. Such information will be valuable in recruitment, promotion, career enhancement, retrenchment, and other decisions. Figure 8 depicts the conceptual model of this research.

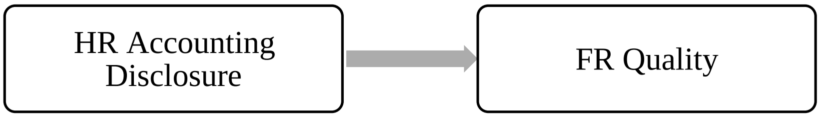

Figure 8: Conceptual model

2.6 Empirical Review

This empirical review comprises two major sections to ensure comprehensive scrutiny of the literature. The first section, 2.6.1, contains a collection of empirical studies on HR accounting, HR accounting disclosure, HR accounting valuation, and the problems and challenges of HR accounting. The idea behind the review of empirical papers in section

2.6.1 is to allow for the identification of the work done so far on HR accounting and HR accounting disclosure. The second section, 2.6.2, of the empirical review covers prior empirical research on FR quality. Section 2.6.2 has two sub-sections, 2.6.2.1 and 2.6.2.2. Sub-section 2.6.2.1 reviews previous empirical studies on FR quality to identify the various methods researchers use in measuring FR quality. Sub-section 2.6.2.2 reviews empirical studies that relate HR accounting with FR quality. The sub-section also reviews prior studies that related other aspects of accounting disclosure to FR quality. This study adopted this strategy to ensure wider coverage of prior studies on the subject matter of this research.

In sections 2.6.1 and 2.6.2, the empirical papers reviewed are arranged based on the year of publication. Within each year of publication, the literature is arranged alphabetically according to the first authors' surnames. The review starts with studies published in 2021.

2.6.1 Human resource accounting disclosure

This section of the empirical review contains reviews of prior studies on HR accounting,

HR accounting disclosure, human resources, HR disclosure, human capital, HC disclosure, IC and IC disclosure. This section also reviews the association between intellectual capital, HC, and human resources, discussed under conceptual review in section 2.3.

Aggarwal (2021) explored how ownership structure influences HR disclosure procedures with a sample of 336 listed Indian enterprises. The author used data from the 2019 and 2020 financial reports of the firms preselected. The findings from the data analysis using regression and descriptive statistics show that HR disclosure among the companies is low and that the disclosure increases gradually. The results also suggest the existence of a considerable positive association between ownership structure and HR disclosure.

Arora and Panchal (2021) conducted a review of empirical papers on HR accounting adoption, problems, and challenges. After reviewing several empirical studies, the authors determined that there is a general low degree of HR accounting adoption and that the main challenges of HR accounting include a lack of an accepted valuation method and the absence of a legal framework. The authors further observed that disclosure of HR information in financial reports is discretionary. The study recommends the adoption of HR accounting as it has a positive correlation with profitability and employee efficiency.

Bello and Egbe (2021) examined firm structure and HR accounting disclosure in listed financial companies in Nigeria. The study investigated the influence of "firm size, leverage and financial performance" on HR accounting disclosure. The researchers used data from all the listed banks and insurance companies from 2009 to 2018. The researchers gathered secondary data from the published annual statements of the selected firms. The researchers applied regression to analyse the data. According to the findings of the study, a firm's financial performance and size have a substantial impact on HR accounting disclosure. Furthermore, leverage has a negligible negative impact on HR accounting disclosure. The authors recommended improving HR accounting disclosure.

Bello and Micah (2021) investigated how corporate governance impacts HR accounting disclosure among financial companies listed on the NSE. The authors used a census of the banks and insurance companies listed between 2009 and 2019. They obtained secondary data from selected firms' and banks' financial reports. They used "board size, board independence, board gender diversity, institutional ownership, and size of the audit committee" as the proxies of a firm's corporate governance. Bello and Micah (2021) scrutinised the data for the study using panel regression analysis. Findings obtained by these researchers reveal that the size of a firm’s board has a considerable negative influence over HR accounting disclosure. On the other hand, board independence, gender diversity, institutional investment, and audit committee all have a positive influence over HR accounting disclosure, with board independence having a significant positive influence.

The study by Bello and Micah (2021) recommended improved HR accounting disclosure by both banks and insurance companies. The authors further called on financial companies to devise means of valuing and recognising their HR value on the balance sheet as against the current practice of expensing investment in human resources. They also called for the institution of a corporate governance mechanism that will ensure management gives the necessary attention to HR disclosure through voluntary disclosure of HR accounting information.

Davoodian and Dasineh (2021) studied the possibilities and obstacles that could impede the establishment of an HR accounting system in Bank Mellat in Iran. The authors conducted a cross-sectional study in which they collected primary data from 189 of the 371 accountants and other staff members at Bank Mellat. Davoodian and Dasineh (2021) employed correlation and regression to examine the behaviour of the data. The authors found an insignificant positive association between the establishment of an HR accounting system and adequate knowledge and understanding of HR accounting. They also found a positive connection between the establishment of an HR accounting system and the availability of HR accounting software and the attention given to the economic value of HR.

Khan (2021) studied the impact of HR accounting on the overall financial performance of reporting entities. The author used “human capital efficiency, profitability, return on asset, and return on equity as proxies for financial success.” The author also collected primary data from 268 employees of small and medium enterprises in Saudi Arabia using a questionnaire. The respondents were drawn from the finance and human resources departments of the SMEs. Khan

(2021) used linear regression to analyse the data. The results of the data analysis by Khan (2021) show that HR accounting has a substantially strong influence on three out of four proxies of financial performance return on assets. HR accounting has a substantial adverse effect on the return on assets. Khan (2021) concluded that HR accounting is a new concept in Saudi Arabia and that this study contributed to creating awareness about HR accounting in the country and bringing out its benefits. The author also avers that the study contributed to making decision-makers, human resources practitioners, and managers of SMEs realise the benefits of adopting HR accounting for its potential in enhancing the FR quality of the SMEs' annual reports.

Kusumastuti (2021) investigated the effect of firm characteristics and performance on HR accounting disclosure using secondary data from the 2017 to 2019 financial reports of twenty-five listed banks in Indonesia. The author determined the level of HR accounting disclosure using Syed's (2009) HR accounting disclosure index and used firm size, leverage, CAR, and loan to deposit ratio (LDR) as proxies for firm characteristics. The author used profitability (measured by profit after tax and earnings share) as the proxy for bank performance. The author analysed the data by applying regression techniques. From the results of the analysis, Kusumastuti (2021) found that four proxies of firm characteristics have a statistically significant positive impact on HR accounting disclosure. Furthermore, profitability and firm age have no significant impact on HR accounting disclosure.

Madugba et al. (2021) examined how IC affected the financial performance of listed Nigerian manufacturing companies using data from the financial statements of twenty-four firms. They measured intellectual capital using Value-Added IC (VAIC) and took return on assets as a proxy for financial performance. They used descriptive statistics and OLS regression to study the data. Madugba et al. (2021) concluded from the results of the analysis that there is a substantial positive association between IC and the financial performance of manufacturing firms. They further concluded that sufficient and effective management of intellectual capital is a key to achieving optimal financial performance and further recommended that the management of manufacturing companies in Nigeria should ensure efficiency in managing their intellectual capital.

Pham et al. (2021) undertook research to determine the effects of company characteristics as determinants of HR accounting disclosure among listed firms in Vietnam. The authors used data sourced from the financial statements of 204 firms to determine the levels of their HR accounting disclosure and company characteristics. Using multiple linear regression, they investigated the connection between company characteristics and the degree of HR accounting disclosure. The level of HR accounting disclosure was determined using an unweighted HR accounting disclosure index. They use “firm size, firm age, profitability, leverage, industry profile, and auditor report type” (p. 135) as proxies for company attributes. Findings from the data analysis reveal that profitability, firm size, and age are the most influential variables in the determination of variations in HR accounting disclosure levels. The other proxies (type of auditor and industry type) do not explain the variation in HR accounting disclosure practices of the companies. The study concluded that profitability, firm size, and age are the main predictors of variation in HR accounting disclosure practices among listed Vietnamese companies.

Sisodia et al. (2021) argue that based on “the classical theory of economic growth, the output of a country depends on its human and physical capital” (p. 1). Sisodia et al. (2021) further argue that the theory applies to firms too. Relying on the classical theory, the authors postulated that the “human capital of firm should play a significant role in firm performance and therefore firm valuation” (p. 1). Based on these arguments and postulations, Sisodia et al. (2021) tried to find answers to four key questions. The first question is whether HC affects the value firms. The second question is whether HC affects the future growth of a firm. The third question is whether HC affects the volatility exposure of a firm. The last question is whether firm size influences the linkage between HC and the value of the firm.

To find answers to the four questions mentioned in the above paragraph, Sisodia et al. (2021) collected secondary data sourced from the financial statements of listed Indian companies belonging to 136 industries. The data covered the financial years 2001 to 2019 and the data analysis was by the regression method. The analytical results reveal that HC is positively associated with business value. They also found that human capital affects the future growth opportunities of firms. Other findings by Sisodia et al. (2021) show that human capital reduces volatility related to the future growth of firms and the size of a firm has an influence on the link between HC and a firm’s value.

Wiyadi et al. (2021) studied the HR accounting disclosure practices among Asian countries. The researchers tried to ascertain the level of HR accounting disclosure in six Asian countries. They analysed secondary data obtained from 195 firms' financial reports in 2014 and 2015. They constructed the HR accounting disclosure index using a sixteenitem Syed (2009) HR accounting disclosure matrix for estimating the amount of HR accounting disclosure of the selected company. Using descriptive statistics, Wiyadi et al. (2021) found that Indonesian companies have the highest level of HR accounting disclosure practice, while the Philippines has the lowest level of HR accounting disclosure practice.

Adejuwon et al. (2020) initiated an investigation to identify the determinants of HR accounting disclosure among Nigeria's publicly traded banks. The study used secondary data to test the effects of profitability, listing age, and firm size on the determination of HR accounting disclosure of the sampled banks. They obtained secondary data for the study from 2014 to 2018 annual reports of the preselected Nigerian banks. The study adopted a penal data analysis using least-square regression analysis. Adejuwon et al. (2020) found that profitability and the size of the firms influence HR accounting disclosure positively, while the age of the listing of the banks does not influence the disclosure of HR accounting information. Adejuwon et al. (2020) recommended that banks be mandated to improve their HR accounting disclosure in the financial reports as this enhances the reputation of the banks and reduces agency costs.

Alekhya and Lakshmi (2020) examined the impact of HR accounting on organisational growth. The authors studied the trend in five Indian firms implementing an HR accounting system that also had large numbers of employees. The author collected secondary data for the period 2013/2014 to 2018/2019 from the five organisations and ran a bivariate correlation analysis. The findings reveal a substantial positive connection between HR accounting and both the top-line and bottom-line growth of the firms.

Ali et al. (2020) evaluated HR accounting disclosure practices by financial institutions listed on the Bangladeshi stock exchange (DSE). They also analysed the impact of organisational attributes on HR accounting disclosure. For the study, the authors used a total of ninety annual financial reports from a sample of eighteen financial intuitions. The annual financial reports consulted by Ali et al. (2020) for the study are for the period 2014 to 2018. In the study, they used the number and length of service of employees, the total volume of pages in financial statements, and profitability as the proxies for organisational attributes. Ali et al. (2020) constructed the HR accounting disclosure index using a dichotomous score.

Ali et al. (2020) examined the data and tested the hypotheses of their study using descriptive statistics and inferential analysis. They found that only company size and the total volume of pages in financial reports have a substantial positive influence over HR accounting disclosure. Alternatively, the number of employees has a negligible positive impact on HR accounting disclosure. Furthermore, the results of the research show that the length of service of employees and profitability have an insignificant negative effect on HR accounting disclosure. The study is a contribution toward understanding the trend in HR accounting disclosure of listed financial institutions in Bangladesh and would help firms in developing their HR accounting disclosure strategies.

Odunayo and Festus (2020) are one of the few recent studies on HR accounting and FR quality. The study investigated the effect of HR accounting on FR quality in the Nigerian economy's oil and gas industry. The study used secondary data from ten-year annual accounts of twelve quoted companies. The research is an ex-post facto study that measured FR quality using accounting conservatism, earning quality, and earning smoothness. The researchers used regression analysis to analyse the data. The study concluded that HR accounting has a considerable effect on the FR quality of quoted Nigerian oil and gas firms.

Onuoha et al. (2020) investigated the level and quality of discretionary disclosure of IC by Nigerian banks. The research used both primary data collected through a poll of 271 respondents and obtained data from the financial reports of twelve banks. The author analysed that data using the t-test and other inferential statistics. The findings from the research reveal that the degree of voluntary IC disclosure is significantly better than the quality of other disclosures. The results further show that relational IC disclosure has the highest level of disclosure. The results also show that there is a considerable difference between the two components of IC (human and structural) disclosure.

Sürdü et al. (2020) investigated the factors influencing HR disclosure in the financial reports of Turkish insurance firms using a sample of fifty-four insurance firms. The study utilised secondary data obtained from the 2007–2017 annual reports of the sample companies. The study measured HR disclosure using eight disclosure items, which included employee health and safety; training; assistance and benefits; remuneration; profiles and morale; and employment of women, minorities, and the disabled. The study also measured corporate characteristics using leverage, return on equity, listing status, company type, foreign ownership, number of employees, firm size, and age.

Sürdü et al. (2020) tested the data using correlation analysis and the Ordinary Least Square (OLS) model. The researchers found that HR disclosure is affected by the number of employees, type, and ownership of the company. The study identified information about staff training as the most disclosed HR information in annual financial reports. The study recommended companies improve the disclosure of their HR disclosure practices in their financial reports.

Verma and Aggarwal (2020) explored HR Disclosure items used by companies listed in India. The study constructed an index of eighty-eight disclosure items for 345 listed companies. The results of the data analysis by Verma and Aggarwal (2020) reveal that two disclosure items, HR policy and vision, were the top disclosure items among the eightyeight items.

Given the current accounting practice where human asset value is not reported on the balance sheet because the financial value is not attached to human resources, Asein et al. (2019) argue that this practice reduces the status of human resources as an important resource in any organisation. Therefore, the authors tried to conduct a study on the implications of assigning financial value to human resources and how doing so would affect government taxation. The study employed an ex-post facto study with data acquired from 2012 to 2016 audited financial reports of two purposively sampled listed Nigerian banks.

Asein et al. (2019) used computations and comparison of figures to determine the implications of assigning monetary value to human resources and capitalisation of personnel costs on the assets of the two financial institutions and government taxation. The researchers concluded that the results of their study give credence to the findings of previous studies that called for the capitalisation and recognition of human resource value. They further assert that human resource value complies with the requirements of IAS 38 on intangible assets and should therefore be treated as such on the balance sheet.

Bansal and Sharma (2019) analysed the significance of HR accounting in financial reporting using both primary and secondary data. The study sought to know whether HR accounting improves the financial positions of both public and private companies in India and whether the degree of HR accounting practice has a significant impact on firm profitability. The study used a sample of thirty listed companies (sixteen public and fourteen private companies) and collected primary data through a questionnaire. The researchers pre-tested the questionnaire in a pilot study. The study used a sample of 300 respondents to fill out the questionnaire on the population of managers, accountants, and other employees. The research concluded that very few companies in India practice HR accounting in their external financial reporting.

Using data obtained from the financial reports of companies listed on the Ghana Stock Exchange (GSE) and primary data, Bonsu et al. (2019) studied the link between HR accounting and performance and the factors responsible for the non-presentation of HR value on the balance sheets of quoted firms in Ghana. Bonsu et al. (2019) sourced the secondary data from the financial reports of 2015–2018 of all the listed companies in the GSE. Bonsu et al. (2019) further used a questionnaire to collect primary data from accountants who are members of recognised professional accounting bodies in Ghana. Bonsu et al. (2019) used a regression model to investigate the linkage between HR accounting and financial performance. Based on their data analysis, Bonsu et al. (2019) observed that HR accounting is significantly positively associated with return on equity.

The study by Bonsu et al. (2019) further reveals that the reasons for the exclusion of HR value from the balance sheet are related to some problems related to HR accounting, which include HR valuation problems, the lack of a market for trading human resources, and the fear that the balance sheet of firms may be misleading if HR value is disclosed. The study recommends that the IASB consult widely on the argument for and against recognising HR value on the balance sheet.

Charumathi and Ramesh (2019) observed that traditional financial reporting is out of pace with the current reality of the value of IC, which resulted in discretionary disclosure of IC information. Noting the current position of financial reporting, the researchers put together fifteen intellectual-capital disclosure items. The researchers got the items by examining human capital and intellectual capital disclosure practices around the world and used the disclosure items to measure the IC disclosure of selected listed Indian non-financial companies. The study involved the use of five years of secondary data obtained from the financial reports of the selected firms. The results of the data analysis show a considerable difference in the human capital and IC disclosure practices of the companies. The study also reveals that firm size, profitability, and revenue from foreign operations affect human capital and IC disclosure.

Given the possibility of legislation requiring Australian companies to disclose information relating to their supply chains, Christ et al. (2019) assessed the level of current voluntary disclosure and provided a yardstick for assessing the companies' relationships with their supply chains. To accomplish the research objectives, the researchers conducted a content analysis of financial and other reports, including online disclosure of one hundred companies listed in Australia. The study discovered from the data analysis that there was a low level of disclosure among the companies in annual reports, standalone reports, and online disclosure. The study further found that most of the disclosures are in narrative form, while many disclosure themes are intertwined with corruption and human rights abuses.

Garg and Kumar (2019) investigated the extent of disclosing HR accounting details in the financial statements of Indian firms and the relationship between HR disclosure and firm characteristics. To realise the aims of their study, the researchers collected data from the 2014 financial reports of 106 listed firms and measured the level of HR disclosure by constructing an HR disclosure index. They used firm characteristics, which include the size, the age, the industry and the market capitalisation of the firm; total assets, net sales, profit after tax, liquidity, leverage and profitability as the proxies for company characteristics. The study shows that two firm attributes (size and market capitalisation) have significant positive effects on HR disclosure, while the other firm attributes have non-significant effects on HR disclosure in annual reports. The results also show that 77% of the companies have between 20 and 50 percent of HR disclosure in their financial reports.

Moloi and Adelowotan (2019) investigated the perceptions of finance directors of listed companies in South Africa on the usefulness of disclosing human capital information. The study considered the finance directors as the preparers of annual financial reports. The authors developed a list of ninety-one human capital disclosure items and constructed a questionnaire for data collection using the disclosure items. To corroborate the primary data, the authors examined the substance of the financial reports of the companies where the finance directors work. The authors found from their analysis that the companies did not disclose in their annual reports some of the key human capital disclosure items the study identified, despite the responses from the respondents showing that the items are important. The study insisted that the usual claims by chief executive officers in annual reports that "their employees are their most important asset could not be substantiated by adequate disclosure" in the annual reports (p. 157).

Muda and Erlina (2019) examined the impact of "system quality and information quality on user satisfaction of accrual-based accounting system institutions applications moderated by human resources quality" (p. 1). The study used data from 209 work units in Indonesia and collected the primary data for the study by administering the research questionnaire to the whole population of (209) work units. The statistical analysis tool used in the investigation is "Structural Equation Modelling Partial Least Squares" (Muda & Erlina, 2019, p. 1). Judging from the results of the analysis, the study established that HR, system quality, and information have "a significant positive effect on user satisfaction of accrual-based accounting system of institutions' application" (p. 1). The findings of the study show that the moderating variable, HR quality, effectively moderated the connection between the two variables.

Shukuhian and Ashraf (2019) investigated HR accounting practices in India. The researchers conducted an empirical study into the connection between HR value and the financial performance of Indian companies and used data from the 2006/07 to 2015/16 financial reports of the companies sampled for the study to run multiple regression analyses. The study used net income, income per employee, return on HR value, and the number of employees as proxies for financial performance. The results of the data analysis revealed a positive relationship between HR value and net income. The results further indicate a positive association between HR value and the return on HR value. The study further found that net profit is the major determinant of HR value.

Like in some other countries, HR disclosure in India is voluntary. This, according to Verma and Kirti (2019), leads to inconsistencies in disclosure practices among the firms and across sectors. In addition, they argued that there is a paucity of research articles on HR disclosure. It is against this backdrop that the authors examined the HR disclosure procedures of Indian public sector firms and how firm characteristics affect such disclosure practices. They constructed an eighty-six-item HR disclosure index. Using data from the financial reports, the authors used the index to measure the degree of HR disclosure of five hundred listed companies. The findings revealed that the number of pages of financial statements has a strong positive relationship with HR disclosure, whereas business size and profitability have a minimal relationship with HR disclosure. Furthermore, the results show that other firm attributes like leverage, liquidity, and ownership do not affect HR disclosure.

To analyse "the nature, quality and extent of HR disclosures (HRDs) of UK Financial Times Stock Exchange (FTSE) 100 firms", Vithana et al. (2019) developed and used a new disclosure index for HR suitable for assessing both "the depth and breadth of disclosures" (p. 1). The researchers used five years of data to evaluate the level of comprehensive reporting of HR disclosures by the firms and hypothesised that the employee retention policies of these firms have a positive influence over HR disclosure. The findings from the study reveal that although there is improvement in the “breadth of HRD”, the disclosure is not comprehensive enough. Because of the shortage of empirical studies on the determinants and extent of HR disclosure, the study concluded that the research contributed to the scanty literature on HR disclosure.

Akintoye et al. (2018) analysed how recognising HR value in the annual reports could assist in improving the reliability of the reports. The researchers analysed data from 2012 to 2015 annual reports of four companies, two each from Ghana and Nigeria. They used the Lez and Schwartz model to value human resources. After the data analysis, the study concluded that reporting entities can use HR accounting to address some of the challenges threatening the reliability of financial reporting. The study called on the IASB to issue an exposure draft on accounting standards for HR accounting.

Alawi and Belfaqih (2018) investigated the degree of HR information disclosure in financial statements of listed firms in Qatar to find out the factors responsible for determining the quality of the disclosure. The authors analysed data obtained from the annual reports and sustainability reports of twelve firms. The annual reports and the sustainability reports are for 2013 to 2015, while the companies are those listed under the industrial and real estate sections of the Qatari Exchange Market. They used multivariate analysis to determine how HR expenses and profitability influence the quality of HR disclosure. Findings from the research show that the HR disclosure quality among Qatari companies is minimal. The findings further show that HR expenses compared to the total expenses of a company influence the quality of HR disclosure. In addition, the findings show that profitability has little influence on HR disclosure quality.

Al-Hanini (2018) evaluated the methods of measuring and disclosing HR accounting information in Jordan using primary data. The study aimed at revealing the level of adoption of HR accounting by Jordanian public shareholding companies, the factors militating against the adoption of HR accounting in the country, and the extent to which public shareholding uses HR accounting information in decision making. The author used a questionnaire to collect primary data from eighty respondents who are employees of the Jordanian public shareholding companies. The respondents were comprised of general managers, financial managers, and human resources managers. The study found that even though “public shareholding companies in Jordan” recognised the significance of HR accounting, the companies did not apply it in their day-to-day accounting and financial reporting (p. 1). The study also reveals that there are constraints to the adoption of HR accounting, which include the failure to update the human resources database.

Davies (2018) studied how HR accounting influences the maximisation of shareholders’ wealth using data from the year 200 to 2016 annual statements of twenty listed manufacturing firms in Nigeria. After running regression analysis, he discovered that HR accounting has a significant influence on the ability of the companies to maximise the wealth of their shareholders. Based on the findings from the research, the study recommends proper accounting of expenditure on human resources.

Hay et al. (2018) studied the factors influencing voluntary HC disclosure in the annual reports of commercial banks in Lebanon. Hay et al. (2018) examined forty-eight annual reports of sixteen sampled commercial banks covering the period from 2015 to 2017. Hay et al. (2018) developed and used an HC disclosure index containing twenty-five mostly disclosed HC items and conducted a regression analysis. Findings from the data analysis by Hay et al. (2018) reveal that some form characteristics (“firm size, age and foreign ownership”) have an influence on the extent of HC disclosure in the financial statements of banks in Lebanon (p. 1). On the other hand, “leverage and profitability” are not among the factors influencing human capital reporting by banks in Lebanon (Hay et al., 2018).

Inua and Oziegbe (2018) investigated the relationship between HR accounting and performance. The authors sourced secondary data from the annual reports of eighteen Nigerian banks from 2009 to 2017. The study used some HR accounting attributes (staff strength, board remuneration, staff cost, firm size) as proxies of HR accounting. The investigation adopted regression for data analysis. At the end of the analysis, the study reported that a substantial link exists between employee cost, employee size, and firm size and the banks' performance. They also reported that board remuneration has no substantial relationship with the performance of banks.

Ofurum and Adeola (2018) investigated the association between HR accounting and profitability. The study utilised secondary data sourced from the annual financial reports of nine firms listed in the services sector of the NSE. The financial reports were for the years 2011 to 2015. The study also used workers' salaries as the proxy for HR accounting, whereas net income and "return on capital employed" proxied the firm's profitability. The study used OLS and correlation to analyse the data. Findings from the study reveal that HR accounting is substantially associated with profitability of firms. The study recommends that firms properly train and motivate their employees with remuneration and rewards to boost their morale and make them more productive. The study also called on firms to make retirement benefits attractive for their employees to attract competent workers.

Oko (2018) investigated the possible effects of the presentation of human asset value in the annual reports of firms in Nigeria. Additionally, the author studied the characteristics of payments in the form of investments and expenditures on human resources by listed firms in Nigeria. The study also determined the relevance of adopting the HR accounting model to FR quality. It further determined the linkages between HR accounting and corporate performance and the linkages between HR accounting and the financial positions of reporting entities in Nigeria. The study used a four-point Likert scale questionnaire in collecting primary data from sixty research participants from three reporting entities and a simple regression analysis model for data analysis. Findings from the study affirmed the existence of a relationship between HR accounting and profitability (the proxy of corporate performance). The results also reveal the existence of a favourable association between HR accounting valuation and the firm financial position of listed companies. The study concluded that the inclusion of HR value in the financial reports would favourably affect the profitability and financial position of firms. The investigation by Oko (2018) recommends the recognition of human resources as intangible capital on the balance sheets of reporting entities.

Oladele et al. (2018) studied the effect of HR accounting disclosure on the economic performance of listed companies in Nigeria. The study used secondary data from the financial statements of some selected companies to develop an index for assessing the level of HR disclosure by each of the sampled companies. Out of a total of 188 companies in the manufacturing and non-manufacturing sectors, the authors selected twenty for the study and scrutinised 2011 to 2015 annual financial reports of the preselected companies for secondary data. The results of the data analysis show that HR accounting disclosure positively correlates with financial performance of the firms. Therefore, the authors recommend that listed companies improve their reporting of HR accounting-related information. They also called on regulators to set a minimum standard for disclosing HR accounting information in financial reports.

Shreelatha et al. (2018) are among the few studies that relate some aspects of HR accounting disclosure to financial reporting. The researchers studied the association between HR accounting disclosure and investment decisions. The study used primary data administered to the investors in Bengaluru (a city in India) and used a T-test for the data analysis. The study concluded that the inclusion of the disclosure items for HR accounting in the annual reports influences investment decisions.

In research on the impact of HR accounting on the profitability of companies listed under the telecommunication segment of the NSE, Amahalu et al. (2017) discovered that HR accounting has a substantial positive influence on the profitability of companies. To conduct the study, Amahalu et al. (2017) used secondary data collected from 2010 to 2015 financial reports of eight sampled companies. The study used “return on assets”, “return on equity” and “return on capital employed” as the proxies of profitability (p. 420–421). The results of the analysis reveal that HR accounting has a substantial positive influence on the return on capital employed and on equity. The study advises that telecommunication companies should train and develop their human resources to maintain their competitive advantage. The study also called on the IASB to issue accounting standards on the valuation and reporting of HR accounting information in financial reports.

Anifowose et al. (2017) investigated the linkage between board composition and IC disclosure in financial reports. The investigation is into whether the ethnic and religious compositions of board members influence HR accounting disclosure in 91 NSE-listed companies. The author used secondary data obtained from 2010 to 2014 financial statements of the selected ninetyone listed companies. The author also used religion and ethnicity as measures of board homogeneity. The results from the investigation show that the religion and ethnicity of board members have a balancing effect on the influence of IC disclosure on the cost of capital. Although the author cautioned that the findings from the data analysis in their study may not be generalised to small companies, the results could be of significance to policymakers like the FRC in formulating standards on corporate governance.

Using an ex-post facto research design, Asika et al. (2017) explored the consequences of adopting HR accounting on the profitability of firms. The author took the increase in the number of staff and the increase in employees’ retirement benefits as proxies for HR accounting adoption and used data from the annual accounts and financial statements of ten commercial banks listed on the NSE and analysed the data using a paired T-test. From the data analysis, the author found that all the three proxies of HR accounting adoption (addition to the number of employees and increase in employees' retirement benefits) are positively interrelated with the profitability of the banks. Some of the recommendations by Asika et al. (2017) called on banks to put more effort into training and developing their employees and said that relevant authorities should consider the possibility of issuing accounting standards on HR accounting.

Bhattacharjee et al. (2017) conducted a study among human resources executives in Bangladeshi companies. The study aimed to examine the methods and practices of HR accounting. The study found a low level of HR accounting adoption in the country and that the inclusion of HR accounting disclosure items improves FR quality. The study further discovered that HR accounting enhances the performance of employees.

An empirical investigation into the contribution of HR valuation to a firm's financial performance was conducted by Jesuwunmi et al. (2017) using data from firms listed on the NSE. The authors used human resources costs and human capital efficiency as the proxies of HR valuation and collected secondary data from the audited reports of twenty-four companies out of a population of 186. They used the audited financial reports covering the period from 2011 to 2016. The authors analysed the data using a multiple regression model and Pearson correlation coefficient. The investigation found that HR costs and HC efficiency significantly predict the returns on investment, return on assets, gross profit margin, and asset turnover of the firms sampled. Furthermore, the investigation found that human capital efficiency is an insignificant predictor of net profit margin. The authors recommend that management make an effort to strike a balance between human capital costs and assets to achieve maximum human capital efficiency and effective utilisation of human resources. They also recommend the issuance of an accounting standard on HR accounting to ensure uniformity in disclosure and promote reliability and comparability of HR accounting information.

Moghadam et al. (2017) conducted a study to identify the appropriate model of HR accounting for adoption in Pouyan Sazeh, an Iranian company. A total of 212 human resources managers and personnel were surveyed for the study, which used descriptive statistics for data analysis. The study involves subjecting three human resources models (cost model, replacement model, and Flamholtz model) to an investigation. The results of a Kolmogorov-Smirnov test show that the cost model has the highest rank, meaning that respondents preferred the cost model for adoption in the company. The results also show that the Flamholtz model was the least preferred.

Ojokuku and Oladejo (2017) investigated the factors that influence HR accounting disclosure among listed manufacturing companies in Nigeria. Specifically, the authors investigated the effects of the number of employees, firm age, turnover, and market size as proxies of firm characteristics on HR accounting disclosure. They used secondary data from the year 2015 financial reports of thirty-seven companies, comprising those listed under industrial goods, consumer goods, agriculture, and conglomerate sections of the NSE. The results of the data analysis by the authors show that the number of employees, firm age and market size are significantly related to HR accounting disclosure. The results of the data analysis further reveal that turnover is not significantly influenced by HR accounting disclosure. They concluded that firm characteristics are important determinates of HR accounting disclosure among listed manufacturing companies in Nigeria.

Omole et al. (2017) studied the effect of HR accounting on shareholders' value among oil and gas firms listed on the NSE. The study analysed modalities for human resources cost identification, measurement, and disclosure in the financial statement as an asset. The authors used secondary data obtained from the 2004–2016 financial statements of the sampled oil and gas firms. They also used “regression and correlation analysis” to analyse the data (P. 121). The results of the data analysis imply that there is a significant positive correlation between HR accounting and shareholders’ value and that investment in human resources has the characteristics that call for capitalisation as against expense. The study recommends the issuance of accounting standards on HR accounting to standardise HR valuation and uniformity in disclosure.

Onyinyechi and Ihendinihu (2017) carried out research into the association between HR accounting and financial performance. Onyinyechi and Ihendinihu (2017) attempted to ascertain the level to which HR accounting affects the financial performance of firms listed in Nigeria. The research used net assets, profit after-tax, and total revenue as proxies for financial performance and personnel benefit cost as a proxy for HR accounting. The researchers carried out regression analysis and T-test on the secondary data obtained from 2011 to 2015 published annual reports of fifty listed Nigerian companies. The results from the regression analysis show that employee-related costs have a positive and statistically significant effect on the profit after tax. Additionally, staff costs have a negative effect on net assets.

Omole et al. (2017) related HR accounting to shareholders’ value. They conducted the study using data from the 2004–2016 financial reports of listed petroleum companies in Nigeria and used E-views to run regression analysis on the data. The study found a positive linkage between the cost of human capital and the value of shareholders. The study further reveals that investment in human resources is more suitable for capitalisation than spending, based on the characteristics and nature of such investments.

Research by Pisano et al. (2017) showed how ownership concentration affects HC disclosure on LinkedIn pages. The researchers studied a sample of one hundred and fifty companies in Europe through content examination of the LinkedIn pages of the selected firms. The authors used regression analysis to test the hypotheses of their study. They found that ownership concentration has a negative impact on HC disclosure on LinkedIn pages. The research concluded that the result of their study confirmed the view that closely held companies do not have the motivation to provide discretionary HC disclosure. One of the limitations of the research by Pisano et al. (2017) is that it did not envisage the differences in the quality of the voluntary disclosure of the HC information.

Petera and Wagner (2017) investigated the degree and quality of HC disclosure practices among the largest firms in Czechia. Specifically, the investigation sought to find out the quality of HR disclosure, differences in HR disclosure, and the factors that influence the quality of HR disclosure among the large firms in Czechia. The investigation involved the use of data extracted from the annual financial statements of fifty companies. The investigators analysed the data using descriptive and inferential statistics. From the results, they found a substantial difference in the quality of HR disclosure by the fifty sampled companies. The study also revealed that the disclosure of human resources information by the firms is rudimentary.

Using content analysis, Agbiogwu et al. (2016) examined the effects of HR costs on the profitability of Nigerian banks. The authors used the year 2020 to 2014 audited financial reports of Zenith Bank and First Bank for their study. They also used regression analysis to test the association between HR costs and profitability. The results of their analysis show that the proxy for human resources cost, and staff cost, has significant effects on profitability. One of the recommendations of the examination by Agbiogwu et al. (2016) is that there is a need to have uniformity in the way banks identify and measure the cost of their human capital.

Akintoye et al. (2016) investigated the impact of adopting IFRS on HR accounting disclosure using the financial reports of eleven Nigerian banks. The annual reports covered the period from 2009 to 2013. The investigators used a modified Syed (2009) HRs accounting disclosure index with seventeen items. They also used descriptive statistics, analysis of variances

(ANOVA), and regression to analyse the data. The findings from the data analysis revealed no statistically significant difference between financial statements prepared using SAS and those prepared using IFRS in terms of HR accounting disclosure. Furthermore, the results show that IFRS did not significantly affect HR accounting practices. Therefore, they concluded that, despite the hype about the extensive disclosure requirements under IFRS, the new international standards did not envisage HR accounting disclosure. Therefore, the investigation recommends the establishment of an accounting standard on HR accounting.

Altal (2016) explored the scope of IC disclosure among pharmaceutical manufacturing firms in Jordan and its effect on the market values of the companies. Altal (2016) considered all three dimensions of IC, which are “human capital, structural capital and relational capitals” (p. 281). The study measured market value using return on assets and the rate of annual trading value. Altal (2016) obtained the data from the research from the 2007 to 2012 financial reports of six firms registered on the Amman Stock Exchange in the pharmaceutical manufacturing section of the exchange. The study also used regression analysis to study the data. The results of the data analysis in the study revealed that the disclosure of the three components of intellectual property has a considerable effect on a firm’s value. Therefore, the research recommends that pharmaceutical manufacturing should improve the disclosure of the three components of IC and also strategies for investing in intangible assets.

Amahalu et al. (2016) researched to find the effect of HR accounting on the performance of listed banks in Nigeria. Amahalu et al. (2016) used employee costs as a proxy for HR accounting and used returns on assets and equity and market-to-book value as proxies for financial performance. Amahalu et al. (2016) used data obtained from the financial reports of the selected listed banks in the period 2010 to 2015 to conduct ex-post facto research and OLS regression analysis for data analysis. Amahalu et al. (2016) found a statistically significant positive connection between HR accounting and accounting performance and recommended that the value of HC should be made part of the items to be presented on the balance sheets of firms to help in making investment decisions.

Dasht et al. (2016) researched to determine the impact of disclosing IC information on the market capitalization of Pakistani-listed firms. The researchers claimed that their study was the first empirical investigation into the effects of IC disclosure on the market capitulation of Pakistani companies. They used panel data from thirty companies. The data covered the period from 2010 to 2012. Relying on the findings from the research, the researchers concluded that intellectual-capital disclosure has a relatively significant positive influence on the market capitalisation of listed Pakistani companies. Therefore, they recommend that Pakistani firms improve the disclosure of their intellectual capital to improve their market capitalisation and gain investors' confidence.

Ekundayo and Odhigu (2016) explored the factors that determine HC accounting in Nigeria. In conducting the study, the authors used data extracted from the financial reports of thirty companies listed on the NSE in the year 2014. To study the relationship between the variables under investigation, the authors analysed the data using OLS. The results of the data analysis reveal that the number of employees and employee-related costs has a considerable effect on HC accounting.

Through a thorough review of prior studies, Hasan et al. (2017) developed a model for investigating the determinants of IC reporting. In addition, they collected data from the 2016 financial reports of forty banks in Bangladesh for the research. Findings from the data analysis reveal that corporate reputation is a major determinant of IC disclosure because it has a significant positive influence over IC disclosure. The authors averred that the conceptual framework they developed was the first and would assist in the development of uniform IC disclosure guidelines.

Ibarra and Cosico (2016) studied the level of awareness of stakeholders about HR accounting practices and costing in the Philippines. The researchers used a questionnaire to collect primary data from human resources managers, supervisors, finance officers, chief accountants, and accounting supervisors. Findings from the data analysis reveal that awareness about HR accounting is at a very low level. The results also show a low level of acceptance of HR accounting; as such, the companies continued to use traditional accounting practices.

Justus and Christopher (2016) aimed at investigating the impact of HC development on the FR quality of non-governmental organisations (NGOs) in the Gulu District of Kampala, Uganda. They collected primary data using a questionnaire administered to seventy-nine respondents who were accounting and finance staff of local and international NGOs. The authors used regression analysis techniques to study the data. The data shows that HC development has a significant positive impact on the quality of the FR of the selected NGOs.

Like many authors on HR disclosure (Onuoha et al., 2020; Omoro, 2019; Absar, 2014), Kaur et al. (2016) maintain that HR disclosure in India and many other countries around the world is voluntary. They also observed discrepancies in human resources reporting by Indian companies due to the differences in human resources practices and the voluntary nature of HR disclosure in annual reports. Kaur et al. (2016) investigated the dimensions of HR disclosure. They also examined the determinants of HR disclosure among listed companies in India. They conducted their research in three stages. First, the researchers developed a sixteen-item HR disclosure index and then collected secondary data from the annual reports of twenty sampled firms. The last stage of the study is data analysis. The researchers used descriptive and multivariate analyses to investigate the data. Results from the data analysis reveal that there is a statistically significant level of differences in HR reporting among the sampled companies. Further, the results show that government share of ownership and company size are statistically substantially positively correlated with the degree of HR disclosure. The researchers explained that the cross-sectional design of the research, the use of an unweighted index, and the dependence on secondary data are some of the limitations of their study. Therefore, they recommend future studies consider adopting a longitudinal design and the use of a weighted HR disclosure index.

Khan and Hossen (2016) conducted research on the level and impact of HR accounting using data from twenty-nine listed commercial banks in Bangladesh. The researchers collected primary as well as secondary data for their research. They also collected primary data from skilled employees of the human resources departments and finance and accounts departments of the selected banks using a questionnaire. The researchers also collected secondary data from the 2012 and 2013 financial statements of twenty-nine selected commercial banks in Bangladesh. They then analysed the data using descriptive statistics. Findings from the data analysis show that the adoption of HR accounting practice is at an infant stage among commercial banks. They concluded that reporting HR accounting information in the published annual financial reports of the banks was scanty, although disclosing such information is beneficial to both the organisations and the investors.

Kwarbai and Akinpelu (2016) used data from 2009 to 2014 financial reports of preselected firms quoted on the NSE under the industrial goods sector to examine the effect of HC efficiency on companies' performance. They used growth, earnings per share, return on assets, HC efficiency, HC efficiency, lagged HC efficiency, and firm size. Findings from the study show a statistically significant positive connection between HC efficiency and return on assets and earnings per share. The findings further revealed a statistically negligible negative association between HC efficiency and firm size, which lagged HC efficiency and growth in the number of staff.

In a master's thesis, Larojan (2016) aimed at developing an IC index that would be able to study the quality of IC disclosure practices among listed companies in Sri Lanka. The student researcher also aimed at investigating the connection between firm characteristics and IC disclosure practices using secondary data extracted from the published financial reports of fifty listed companies from 2010 to 2014. He constructed a twenty-item IC index and analysed the data collected using ANOVA, correlation, and regression analysis. The study found that most companies listed in Sri Lanka that disclose intellectual capital information in their annual reports use qualitative disclosure. The findings of the study also reveal a significant positive impact of some firms' characteristics (size of the company and board independence) on IC disclosure practices among the listed companies studied. However, the results reveal that some firm characteristics (firm age, industry, profitability, ownership, and leverage) have a statistically insignificant effect on IC disclosure practices among the firms studied.

According to Naghshbandi et al. (2016), the lack of a standard and legal framework for HR accounting made it difficult to present HR value in financial statements. It was with this understanding that they conducted a study to analyse HR accounting practices, benefits, and challenges among Indian companies. The study used primary data sourced from one hundred accountants and managers working in fifteen Indian companies and analysed the data using regression analysis. At the end of the research, the study recommended that Indian companies adopt HR accounting practices.

Ogbodo and Egbunike (2016) examined the nexus between HR performance and firm performance as proxied by ROA and net profit margin (NPM). Ogbodo and Egbunike (2016) used "revenue per employee, net income per employee, and firm size" to measure HR performance (p. 74). The focus of the study is the financial sector of Nigeria's economy. Therefore, the researchers collected secondary data from the audited financial reports of the sampled listed banks and insurance firms. The annual reports used are for the 2012 and 2013 financial years. They subjected the data to regression and descriptive statistics. The research findings reveal a considerable positive relationship between HR performance and company performance. The study concludes by calling on companies in the financial services sector in Nigeria to pay more attention to disclosing the value of their human resources in their annual reports. The study also called on regulators to develop an appropriate means of measuring and reporting HR value in financial statements.

Olayiwola (2016) conducted a panel study on fifty preselected listed Nigerian manufacturing firms. The study examined the nexus between HR accounting information and a firm's value using data from financial reports from the years 2007 to 2014. The study used pooled OLS and the Fixed Effect Model (FEM) to examine the data and discovered a significant positive relationship between the cost of human capital and the share price. The study shows that when capitalised, investment in human resources can result in an increase in shareholders' values and can improve the image of manufacturing companies in Nigeria.

Olowolaju and Oluwasesin (2016) investigated the inter-relationship between HC and the profitability of manufacturing firms. The study utilised data from a sample of ten firms out of the population of firms and collected the data from their financial reports. It scrutinised the data by applying correlation, regression, and descriptive statistics. The study concludes that expenditure on HR is significantly and positively associated with the profitability of manufacturing companies. The research by Olowolaju and Oluwasesin (2016) further infrared that companies that treat human capital as an asset tend to have a more motivated workforce than those that do otherwise.

Like Agbiogwu et al. (2016), Omodero et al. (2016) conducted a study on how human resources costs affect performance using data from the published financial statements of ten listed Nigerian firms. They investigated how investment in human resources affects the value of after-tax profits and turnover. Using OLS, they found that personnel costs significantly and positively affect profitability, accounting for about 73.9% of the changes in after-tax profits of the sampled companies. However, the study failed to find any statistically significant connection between personnel costs and turnover. The study also observed a generally low level of adoption of HR accounting among the selected companies.

Rahmana et al. (2016) conducted research to find out the nature of HR accounting information disclosure among companies in Malaysia. The study involved twenty-three listed banks and financial institutions. Judging from the analysis of the data extracted from the financial reports from 2011 to 2014, the study found that there was an increase in HR accounting disclosure among the selected companies. The study recommends that banks improve their annual financial reports by incorporating more HR accounting disclosure items.

Sarkar et al. (2016) used secondary data to study the HR accounting disclosure practices of listed firms in Bangladesh and the connection between firm characteristics and the quantum of HR accounting disclosure. The study involved a total of forty listed companies. The study used twenty-two disclosure items to create an HR accounting disclosure index and used firm age, firm size, profitability, and industry type as proxies for corporate characteristics. Using multiple regression, the researchers analysed the data to understand the disclosure practices and the interrelationship between the variables. Findings from the research indicate that the average level of HR accounting disclosure among the selected companies was twenty-seven percent. The study further reveals a significant interrelationship between HR accounting disclosure, on the one hand, and industry type, firm size, profitability, and firm age. The researchers probed the connection between HR disclosure and the financial performance of firms in Brazil. They used data from the 2013 financial statements of companies chosen from the IBrX-100 and used the Syed (2009) HR disclosure index. Souza et al. (2016) analysed the data using multiple regression analysis. The study found a positive connection between HR disclosure and performance.

In a study titled “Human Asset Accounting and Corporate Performance,” Adebawojo et al. (2015) conducted ex-post facto research using primary data from the eight listed banks in

Nigeria (p. 45). The study explored the impact of HR accounting on the performance of banks. After analysing the data, Adebawojo et al. (2015) observed that HR accounting significantly and positively influences the performance of banks. Therefore, the study concludes that capitalising HR value would positively affect the performance of reporting entities. The study further recommends that reporting entities disclose the value of their human assets as intangible assets.

Dey and Sarkar (2015) examined “the nature and extent of human capital (HC) disclosures in corporate annual reports of the financial institutions of Bangladesh” (p. 53). The researchers collected data from the financial reports of twenty listed financial institutions in Bangladesh. They measured the HC disclosure using “the form, location and number of sentences” (Dey & Sarkar, 2015, p. 53). According to the study's findings, ninety percent of the sampled financial institutions voluntarily disclose information on their HC in their financial statements. The results also show that “training and development have the highest number of reported items” (Dey & Sarkar, 2015, p. 53). One of the interesting findings from the study is the discovery of one company that has a separate statement on its human capital where the company reports the money worth of its employees.

Dyana and Kesava (2015) studied the nature and features of HR accounting in use by reporting entities in India. To achieve the aims of the investigation, they collected both primary and secondary data from three hundred respondents and thirty listed companies in India, respectively, and used descriptive statistics and ANOVA to analyse the data. They concluded that HR accounting greatly impacts companies in India.

Edom et al. (2015) used data from Access Bank Nigeria Plc to conduct an enquiry about the impact of HR accounting on the profitability of banks. The researchers sourced the data for the study from the published financial reports of Access Bank from the years 2003 to 2012. They analysed the data with an OLS regression. The results of the investigation show a substantial positive connection between training cost, development cost, the number of employees (as proxies for human resources cost) and the profits of the bank. They further found that the number of employees has an insignificant influence on the profits of the bank, although the bank's performance depends on the performance of the individual employees. Some of the recommendations of the study include the need for the issuance of accounting standards on human resources valuation and accounting. The study further recommends that banks improve their employee education, training, and retention policies.

Another study worthy of review is Ifurueze et al. (2015). In a study titled “impact of aggregated cost of human resources on profitability”, Ifurueze et al. (2015) examined the effect of HR costs (both aggregated and disaggregated) on the profitability of firms (p. 30). The researchers used regression analysis to analyse the data they collected from both financial reports and other internal sources of the selected firms. The findings of the analysis revealed a positive association between HR costs and profitability. The study recommends that reporting entities adopt the HR accounting practice of capitalising and reporting the cost of investment in HR as assets.

Khodabakhshi (2015) investigated the relationship between average HR accounting disclosure and firm value among listed reporting entities in India. The author used seven firm years of data from audited accounts of ten listed companies practising HR accounting. The period covered is from the year 2005 to 2012. The author analysed the data using regression analysis. The author observed that HR accounting disclosure exercises a considerable positive influence over firm value.

Onyekwelu et al. (2015) examined the influence of HC accounting on the financial performance of banks using samples of banks listed on the NSE. The authors also examined the influence of HC accounting on the market value of banks in Nigeria. They explained that their study presented a comparative analysis between traditional accounting practices on the determination of firms' net worth and net worth determination under HC accounting (by treating human resources as assets). The authors used two types of data (primary and secondary) in their study. The primary data was collected using a questionnaire, and the respondents were accountants and managers from the selected banks. They also sourced secondary data from the annual accounts of five selected banks. Onyekwelu et al. (2015) analysed the data using descriptive and Chi-square statistics. Results from the study indicate that HC accounting significantly improves the net worth of the selected banks. Therefore, the study recommends the adoption of HC accounting and the resultant capitalisation of investment in human resources. The study also calls on regulators to legislate and compel listed Nigerian firms to adopt HC accounting.

The influence of HC efficiency on the financial performance of Dutch production firms was the subject of an investigation by Parham and Heling (2015). The authors conducted the study using data from thirty-three production firms. They sourced the data from the financial reports for the periods from 2007 to 2012 and applied regression models to analyse the data and ascertain the connection between HC performance and organisational performance. The study found a positive association between HC efficiency and all the three proxies of organisational performance (return on equity, return on total assets, and employee productivity).

Sherif and Elsayed (2015) studied how IC influences the performance of insurance firms in Egypt. They examined secondary data collated from the audited accounts of twenty-nine insurance firms listed from 2006 to 2011. The author analysed the data using OLS. Results obtained from the study revealed a statistically substantial positive relationship between IC and the performance of the selected insurance companies.

Ullah and Karim (2015) observed that human resources are an important factor without which no business can operate. Therefore, the study is aimed at investigating how Bangladeshi firms present HR information in their financial statements. The authors used a content review of the year 2011 financial statements of thirty listed banks to evaluate the level of HR disclosure. The investigation also examined the effect of bank characteristics on HR disclosure among banks in Bangladesh. They analysed the data using OLS regression. The results of the data analysis revealed that banks disclose an average of fifty-nine percent of the excepted HR disclosure in their financial statements. The findings from the study also indicate that there is an insignificant association between bank characteristics and HR disclosure.

Wee and Chua (2015) noted that although the importance of intellectual capital as an asset has been acknowledged, prior studies concentrated much more on how to report rather than the contribution of intellectual capital to organisational performance. Therefore, the study is aimed at ascertaining the prevalence of IC disclosure, investigating the contents of IC disclosure, and finding out whether there is an interaction between IC disclosure and the performance of organisations. To achieve these objectives, the researchers sourced data from the 2011 audited accounts of 299 banks in England listed on different stock exchanges around the world. They analysed the three forms of intellectual capital. Findings from the research show that more than fifty percent of the banks sampled practice intellectual capital disclosure and human capital receives the highest disclosure type of intellectual capital. The findings further show that small banks are behind in reporting their intellectual capital.

Absar (2014) examined HC disclosure practices in the audited annual reports of Indian, Bangladeshi, and Malaysian firms. In the study, the researchers used an HC disclosure index to scrutinise the secondary data sourced from the audited annual reports of sixty leading listed companies in the three countries. The findings from the data analysis show that although the level of HC disclosure is insignificantly different, Malaysia has the highest reporting index. The findings further show that training and development are the most reported disclosure items, while separate HR accounting statements and the employees' education index are the least reported items. The researcher concludes that the HC disclosure index developed in the study is suitable for use by firms in developing countries to improve their human capital disclosure.

In their study, Ibukun-falayi and Falayi (2014) sought to find out how HR accounting improves the financial results of commercial banks in Nigeria. The researchers used secondary data from the 2012 and 2013 financial reports of First Bank of Nigeria. They applied Flamholtz's historical cost model to the data to assess the human resource value of the bank. They then analysed the effects of HR accounting on the "gearing, earnings per share and return on assets" (p. 83). The results show that HR accounting improves the "gearing, earning per share and return on assets" of the bank when the financial reports are prepared according to HR accounting principles (p. 83). Therefore, the study recommends the issuance of specific accounting standards on HR accounting.

Kaur and Singhania (2014) investigated HR accounting disclosure among listed Indian companies. To achieve the set targets of the study, the study developed a twenty-item HR disclosure index and collected secondary data from five years of audited annual accounts of selected listed Indian companies. From the results of the data analysis, the researchers found that only five companies (about one percent of the sampled companies) measured and reported human resources in their financial reports. Furthermore, the authors found that the nature of HR disclosure among the selected companies is inconsistent, which makes comparison difficult. Kaur et al. (2014) concluded that generally, there is a low level of HR accounting among listed companies in India.

Mondal and Ghosh (2014) noted that many researchers and professionals believe that IC plays a significant role in creating value in any firm operating within the knowledge economy. They further postulated that companies operating in the service sector require an optimum amount of intellectual capital. They, however, argued that empirical evidence has shown that, generally, firms disclose far less information regarding their IC in their annual reports. Following the above arguments, the authors investigated the factors that influence IC disclosed in the financial statements of Indian firms. They investigated the IC discretionary disclosure practices of thirty knowledge-based reporting entities in India concerning their corporate characteristics. They constructed an IC index for assessing the level of IC disclosure made by the sampled reporting entities and analysed 2009 to 2012 annual reports of the reporting entities to collect data and then ran multiple regression analyses on the data. The authors found that audit committee size, as well as the size and age of reporting entities, have a substantial influence on the IC disclosure practices of the firm studied. However, leverage and profitability have a negative effect on the IC disclosure of the sample companies. They further discovered a negative connection between IC efficiency and IC disclosure. Thus, the authors concluded that firms with efficient IC disclosure provided less IC information in their financial statements for fear of losing their grip on their competitive advantage.

Nerantzidis (2014) examined the IC disclosure by listed companies in Greek and compared the companies to identify differences in the IC disclosure practices based on sector and capitalisation. The author studied the audited accounts of forty-nine listed reporting entities and found that reporting entities in Greece report relational capital more than any other type of IC. The author also observed that structural capital is the second category of IC commonly reported by reporting entities in Greece, while human capital receives the least attention among the three types of intellectual capital. Further findings from the study show that knowledgebased and big companies report more intellectual capital in Greece.

Prosvirkina (2014) studied the influence of HR effectiveness on the organisational performance of Russian banks. The research utilised secondary data from the audited annual accounts and reports of one hundred and ninety-seven banks. The findings from the study show a significant correlation between return on investment in human capital and all the proxies of organisational performance. The findings further show that the effectiveness of human resources influences organisational performance.

Ullah et al. (2014) described HR disclosure methods used by textile firms in developing countries with available manpower as “a new flavour in social accounting literature” (p. 571). Therefore, the researchers investigated how companies in Bangladesh disclose human resources and the connection between HR disclosure and firm attributes. For the study, they scrutinised the annual reports of all the twenty-nine textile manufacturing companies in the Bangladeshi economy. The study used an eighty-one HD disclosure index with eight categories. The findings from the research show that the average HR disclosure level of the sampled textile manufacturers is up to fifty percent. The findings also show that sixty percent of all the textile companies disclose only up to half of the HR disclosure items. Lastly, the findings also indicate that HR disclosure is significantly and positively related to firm size.

Vohra and Chaudhary (2014) investigated the influence of HR accounting practices on firm performance. The study involved primary data collection using a questionnaire. Vohra and Chaudhary (2014) collected data from 103 owners and managers of firms located in four cities in India. Vohra and Chaudhary (2014) applied multiple correlations and regression to analyse the data. Findings from the research show that HR accounting practices positively affect firm performance with mediation through decision-making and planning.

Ahmadu (2013) examined how human capital efficiency impacts the financial performance of banks. In conducting his study, the author used data extracted from the audited accounts of listed Nigerian banks. He then used regression analysis as the statistical tool for analysis in the research. Findings from the study revealed that the efficiency of human capital does not significantly influence the earnings per share and return on equity of the banks. The author concluded that human capital efficiency does not predict the return on equity of banks.

Edirin (2013) studied the effects of human capital accounting on financial statement analysis and decision making. Eidirin (2013) used primary data from responses of investors in the Nigerian capital market, professional accountants, and accountants in academia (lecturers and instructors) in Nigeria's tertiary institutions. He used a validated structured questionnaire as a tool for data collection for the study. The author also used percentages and Chi-square to scrutinise the data obtained from the one hundred and forty-five respondents. The findings from the analysis show that human capital accounting significantly affects the comparability of financial reports. Based on the findings, Edirin (2013) recommends the development of an accounting standard for human capital accounting and the unification of valuation and accounting methods in human capital accounting. He further recommends the capitalisation and recognition of human asset value in the financial statements and the review of the curriculum of both tertiary institutions and professional bodies to accommodate human capital accounting.

Like other prior studies in HR accounting, Enofe et al. (2013) studied the connectivity between HR accounting disclosure and financial performance. The study further studied the different levels of HR accounting disclosure by companies in the financial and non-financial sectors of the NSE. Using a sample of fifty listed companies, the study applied multiple regression analysis to the secondary data. To determine the level of HR accounting disclosure, Enofe et al. (2013) used a fifteen-item Syed (2009) HR accounting disclosure index. The study finds a higher degree of disclosure among companies in the financial sector compared to those in the non-financial sector.

Hamzah et al. (2013) noted that up to the time of conducting their research, the annual reports companies produce do not give quantitative information on HC as most of the information presented in the reports is qualitative. Hamzah et al. (2013) argued that the qualitative information provided on human capital in the annual report "is often general and of little value" (p. 53). This lack of quantitative information on human capital prompted Hamzah et al. (2013) to examine the HC disclosure practices of service companies in Malaysia. The researchers collected data from the 2009 audited accounts of preselected listed service companies in

Malaysia. The findings from the research show that there are variations in the reporting pattern of human capital by Malaysian service companies and that most of the companies provide more information on employee attributes. The findings also show that in the services sector, the financial industry has the highest rank for human capital reporting, while the technology industry provides the most information on employee training and development.

The study by Ijeoma and Aronu (2013) investigated the influence of HR accounting on the financial reports of banks. The researchers used data from the employees of Zenith Bank, one of the listed banks in Nigeria. They also used the data they collected using a questionnaire to determine the influence of HR accounting on the balance sheets of the bank. The researcher used the data to know whether the failure to adopt HR accounting would affect future investment in human capital. They used the Kruskal-Wallis test for data analysis. At the end of the research, it was reported that HR accounting practices improve the financial position of banks in Nigeria. The research further shows that the non-application of HR accounting by the banks has negative effects on future investment in human capital.

In another study, Ijeoma et al. (2013) collected primary data from the employees of First Bank of Nigeria and Zenith Bank to probe the contribution of HR accounting to the financial reports of banks. The researchers used both a questionnaire and an interview as instruments for data collection and used the Mantel Test analysis to analyse the data. They concluded that HR accounting could assist the management of the banks to treat their human resources as assets through the capitalisation of investment in HR, which can reduce expenses and cause an improvement in the productivity of the employees.

Ikpefan et al. (2013) observed that users of accounting information require such information for decision-making and that accounting in the fast lane was criticised for lack of guiding rules and consistency. The researchers further cited the failure of accounting to recognise HR as an asset in the audited annual reports as one of the setbacks of accounting identified in the literature. Therefore, the researchers deemed it expedient to appraise the impact of HC accounting on the successes of microfinance banks (MFB) in Nigeria through content analysis of financial statements.

To achieve the objectives of their study, Ikpefan et al. (2013) scrutinised annual reports of sixteen selected MBFs out of a population of forty-eight in Ogun State. In addition, they collected primary data from 320 respondents using a questionnaire. The respondents, who were directors, staff, and shareholders of MFBs, were randomly selected. The further analysed the data using both descriptive and inferential statistics. One of the key findings from Ikpefan et al. (2013) is that 98.4 percent of the respondents believed that HR-related costs ought to be capitalised and recognised as assets under conventional accounting practices. The study concluded by recommending the recognition of HR value as an asset on the balance sheets of reporting entities.

Jaarat (2013) investigated the possibility of measuring and reporting HR value on the balance sheets of reporting entities as a class of intangible assets. The investigator used a questionnaire to collect primary data from one hundred and thirty individuals working in the finance departments and human resources departments of Jordanian firms, as well as from members of the executive management teams of these firms. At the end of the study, the investigator concluded that it was possible to measure and report human resources as assets and proposed a model for measuring HR value for financial reporting purposes. The study also recommends further study in HR accounting valuation and reporting.

Majdalany and Henderson (2013) noted that prior studies on intellectual capital have ignored the other side of the story, which is intellectual liabilities. It was on this note that Majdalany and Henderson (2013) probed the impact of IC and intellectual liabilities on the financial success of firms. They studied the audited accounts from 2010 to 2011 published by all the listed reporting entities in the United Arab Emirate (UAE) and analysed the data using multivariate regression. Findings from the research show a significantly positive association between human assets, internal assets, external assets, human liabilities, external liabilities, and internal liabilities on one hand, and the firm's performance (ROE) on the other hand.

Qatawneh (2013) determined the significance of HR accounting in the accounting information system (AIS) of reporting entities in Jordan. The investigation used a questionnaire to collect primary data from 173 respondents working as financial managers in 173 listed companies in Jordan. The author ran a correlation analysis on the data. The findings from the investigation reveal that HR accounting information significantly positively affects the AIS of Jordanian reporting entities. Moreover, the authors concluded that the findings indicate that HR accounting information has a considerable positive effect on the reliability of AIS.

Ramat and Noah (2013) examined the extent and the disclosure quality of IC in the annual reports and accounts of companies in Nigeria. To achieve the objective of the study, the researchers constructed an index of IC disclosure and collected data from the audited annual accounts of fifty companies. They analysed the data using regression analysis. Findings by the researchers reveal a low IC disclosure level by the sampled companies. They also observed that most of the IC disclosure was in narrative and qualitative and relational capital, which has the highest level of disclosure among the types of intellectual capital. The researchers concluded that Nigerian companies commit to IC disclosure.

Saad and Hassan (2013) explored how reporting entities in Malaysia report information about HC to the public. The researchers examined the mode of reporting human capital by the listed companies in Malaysia and investigated the motivation behind the external reporting of human capital. The authors also identified the possible problems associated with external reporting of human capital. To achieve the aims of their research, the researchers conducted a crosssectional study of twenty listed firms with secondary data sourced from annual reports and primary data obtained using a questionnaire. The administered the questionnaire to HR managers of the listed companies selected for the study and analysed the data using descriptive statistics and a t-test.

Uyar and Kiliç (2013) investigated the human capital reporting practices in Turkey using data from listed manufacturing companies. The investigation also identified the factors influencing HC disclosure by Turkish companies. To achieve the objectives of the study, the researchers collected data from the 2010 audited annual accounts of the pre-selected companies and hypothesised that certain firm characteristics are positively associated with HC reporting in the manufacturing sector.

Using multiple regression analysis, they observed that a significant positive connection exists between "HC disclosure level and the variables such as type of industry, firm size, auditing firm size, listing age" (Uyar & Kiliç ,2013, p. 63). The researchers further reported that "profitability, leverage, proportion of independent directors on the board and ownership diffusion were found to have an insignificant association with the extent of HC disclosure" (p. 63). Uyar and Kiliç (2013) concluded that their paper has provided empirical evidence on HC disclosure in emerging markets and has contributed to the existing studies on HC disclosure.

Uyar et al. (2013) conducted an empirical investigation into the factors that affect the voluntary disclosure of information in the audited accounts of companies in Turkey. The researchers sourced secondary data from the contents of the 2020 audited accounts of listed companies and analysed the data using OLS regression and two-stage OLS regression. Findings from the study reveal a positive relationship between discretionary disclosure in the audited accounts and several firm characteristics.

According to Uyar et al. (2013), the firm characteristics that have a positive effect on voluntary disclosure are: "firm size, auditing firm size, and proportion of independent directors on the board; institutional/corporate ownership and corporate governance" (p. 1080). However, the findings from Uyar et al. (2013) reveal a negative relationship between discretionary disclosure and two firm characteristics (“leverage and ownership diffusion”), while other variables (“profitability, listing age, and board size”) do not affect voluntary disclosure significantly (P. 1080).

Vazakidis et al. (2013) investigated the rate of HR disclosure in audited annual accounts by companies in Grace. The study by Vazakidis et al. (2013) also investigated whether firm characteristics can determine CSR. Using data from the 2009 audited annual accounts of thirtyeight companies, Vazakidis et al. (2013) ran correlation and regression analysis.

Zohreh and Safar (2013) carried out “An empirical study of the relationship between human capital value and profitability and market value” (p. 105). The study utilised secondary data gotten from the reports of companies listed on the Tehran Stock Exchange (TSE) in Iran. The companies were listed under eight sectors on the TSE. The researchers sourced the data for the study from 2005 to 2009 financial reports of sixty sample companies. They tested the hypotheses they formulated by analysing the data using the regression model and panel least squares method.

Results from the study reveal the existence of a considerable positive connection between HC value and market value. The results also reveal that there is no connection between HC value and profitability. At the end of the research, the researchers recommended further research on the interactions between HC value and profitability.

Ahesha and Sujani (2012) studied the effect of HC investment on the performance of Sri Lankan listed firms. The study by Ahesha and Sujani (2012) used secondary data from the 2009–2010 financial reports of forty listed companies. The study found that HC investment significantly interacts with financial performance.

Avazzadehfath (2012) studied the HR disclosure practices among listed companies in Iran. The investigator collected the primary data using a questionnaire and secondary data obtained from the audited annual accounts of listed Iranian firms. Results from the study show that there are significant variations among the companies studied in their HR disclosure practices. The results further show that manufacturing companies have a higher HRD index compared with companies in the services sector. The study concluded that the respondents believed that disclosing HR information in the audited annual accounts is beneficial to stakeholders.

The study by Bassey and Tarpang (2012) examined how the capitalised cost of HR influences the productivity of reporting entities. The researchers utilised data from a sample of ten listed reporting entities in the NSE and a questionnaire as the data collection instrument. The research by Bassey and Tarpang (2012) is ex-post facto research. Findings from the research show that costs of acquisition and development, as the major determinants of HR costs, have a significant effect on reporting entities' productivity.

In Darabi et al. (2012), researchers investigated the influence of the components of IC on FR quality in Iran. The study used data extracted from the audited accounts of 184 listed reporting entities covering a period from 2004 to 2009. They used correlational and regression analysis to study the data. The results show that there is a positive relationship between two components of IC (capital employed efficiency and HC efficiency) and FR quality. The results further show a noticeable negative connection between the third component (HC efficiency) and FR quality. Darabi et al. (2012) concluded that the effect of HC efficiency on the quality of FR is stronger compared to the effects of the other two components.

Micah et al. (2012) also examined how HR accounting disclosure influences the financial performance of a reporting entity. The study used secondary data extracted from five years of financial statements of fifty listed reporting entities across the entire sectors of the NSE. The researchers used fifteen items of HR accounting disclosure in line with Syed (2009) to measure

HR accounting disclosure and "return on asset" and "return on equity" as proxies for the performance of reporting entities. Findings from the regression analysis show that "return on equity" is significantly positively associated with HR accounting information. The study concluded that companies with a higher return on equity tend to disclose more detailed HR accounting information to promote the reputation and legitimacy of the reporting entities. The study further shows that about 75.9% of the variation in the level of HR accounting disclosure among the companies is due to financial performance.

Wickramasinghe and Fonseka (2012) conducted a pilot study, which examined HR measurement and reporting among reporting entities in the manufacturing and services sectors in Sri Lanka. The researchers administered a questionnaire to the representatives of thirty sampled companies. The study used descriptive statistics, T-test, and Chi-square to analyse the data. The study reported sectoral differences in HR accounting disclosure.

One of the prior investigations into the interaction between HR accounting and FR quality is Abubakar (2011). In his PhD dissertation, Abubakar (2011) studied HR accounting and the quality of FR of listed service firms in Nigeria. The author used both a "questionnaire and interview" to collect primary and secondary data from the financial reports of listed service companies (Abubakar, 2011, p. 104). The author further used "Kendall's Coefficient of Concordance (KCC), and Pearson's Chi-square" for data analysis (Abubakar, 2011, p. 102). He then analysed the responses from experts about "whether the nature and characteristics of human resource expenditure" make such expenditures suitable for capitalisation or not (Abubakar, 2011, p. 8). To know whether HR accounting disclosure significantly affects financial and investment decisions, he used "Pearson's Chi-square" to analyse the data. In addition to the data analysis, he went further to develop an HR accounting valuation model, which he "tested using the Edwards-Bell-Ohlson (EBO) model" (Abubakar, 2011, p. 102). At the end of the research, the author concluded that human resource expenditure should be capitalised and that doing so will result in an improvement in the FR quality of service companies in Nigeria.

Disclosure in annual reports comprises financial disclosure and non-financial disclosure information (Beest et al., 2009). The study by Arvidsson (2011) sought to investigate whether non-financial disclosure is relevant in decision making from the perspective of the management team. The investigator analysed the views of members of management teams of listed reporting entities. The author administered a research questionnaire to twenty-two investor relations managers of large reporting entities listed on the Stockholm Exchange. The study found that non-financial information, particularly information relating to intangible assets, was getting more attention in financial report disclosure. The author further observed that the increase in the disclosure of non-financial information in the audited accounts was due to both regulatory requirements and demand from stakeholders. The study also observed that those companies were shifting their focus from disclosing more on research and development to CSR and HRrelated information.

Steen & Welch (2011) noted that although the importance of HR accounting has been acknowledged by accountants, prior studies dwelled on the issue of whether human resources can be accommodated under the traditional accounting system and how to quantify and report human resources as assets. Therefore, Steen & Welch (2011) examined the concept of HC and HC measurement by reviewing HR accounting literature and literature on HR and concluded by conducting "a small exploratory study on the measurement of return on investment for international assignments" (p. 57). The study involved interviews for primary data collection. The study reveals the problematic nature of measuring and isolating HC from the broader classifications of intangible assets and IC. As part of the measures to promote research in HR accounting, the researchers recommended a multi-disciplinary approach and collaboration between HR researchers and HR accounting researchers.

Yusuf (2011) studied the effect of HC investment on a firm's performance using secondary data from six banks listed on the NSE. The sampled banks are made up of two old generation banks while the remaining four are new generation banks. The author used salaries and allowances as proxies for HC investment and market price, earnings, and book value as proxies for the firm's performance. Using regression analysis, the research found a significant relationship between human capital investment, on one hand, and market price and book value. Additional findings from the research show that HC investment has a positive effect on the efficiency of the human resources of the banks. The study recommends an increase in investment in human capital by banks to improve their market price and book value. The research further recommends the determination of the optimum level of human capital investment to avoid redundancy.

Branco et al. (2010) analysed the audited accounts of listed reporting entities in Portugal to understand the pattern of their IC disclosure and to study the impact of size, industry and time on IC disclosure and how IC disclosure affects the growth of the companies. Branco et al. (2010) used secondary data from three years of annual reports of the selected companies and used non-parametric statistical analyses on the data. Findings from Branco et al. (2010) show that firm size significantly affects IC disclosure, while industry type insignificantly affects IC disclosure. The results from the study could not confirm the effect of time on IC disclosure. The study noted the effect of small sample size in their study and cautioned that it could impact the objectivity of their findings.

Chaudhry and Roomi (2010) examined the effects of HC development in entities and how to measure investment in HC to determine the financial returns of the investment made. The researchers describe their research as the pacesetter in the manufacturing sector of Pakistan. Using convenient sampling, They selected thirty leading textile companies in Pakistan and administered the research questionnaire to the representatives of the companies.

The research by Chaudhry and Roomi (2010) reveals a significant connection between HC investment and benefits accruable to the organisations that invested. The research further found training and development lead to the achievement of higher organisational performance. Although Chaudhry and Roomi (2010) admitted that the results from their study might not be generalisable, they recommended that future research should use the same techniques used in their study.

Okpala and Chidi (2010) maintain that a robust system of HR accounting can contribute immensely to both the internal and external decisions by the management of organisations and investors. Therefore, the researchers investigated the significance of HC accounting in decisions about investment in shares in Nigeria. They collected primary data from forty-four respondents using a structured questionnaire with twenty-six items. The researchers analysed the data with Chi-squire. The research found that the nature of HC is an important determinant of stock value and investment decisions. Okpala and Chidi (2010) also “empirically verified that the inclusion of human capital in the balance sheet of organisations does help investors make more rational investment decisions” (p. 64). At the end of their research, the researchers recommended the inclusion of HC value in the balance sheets of reporting entities in Nigeria.

Sharma and Shukla (2010) analysed the application of HR accounting in heavy industries in India. The author collected data from the audited accounts of a case study company for the period 2001 to 2010. Sharma and Shukla (2010) tried to find out whether the per-employee value of production changed over the years.

Davey et al. (2009) studied the intellectual capital and marketing capital disclosure practices of fashion firms. The study included an examination of the characteristics and scope of IC disclosure, as well as a comparison of the disclosure practises of fashion companies in Europe and North America. For the study, Davey et al. (2009) scrutinised the 2005 audited reports of fifteen fashion firms in North America to identify the nature and sufficiency of IC disclosure.

Findings from the study indicate that brands are regarded as important capital assets occupying a core location in a firm’s competition and differentiation.

Syed (2009) conducted a study among Bangladeshi companies to determine the association between company characteristics and HR accounting disclosure. To measure the sufficiency of HR accounting disclosure of the fifty-five randomly selected companies, the author developed a method of constructing an HR accounting disclosure index based on sixteen HR accounting disclosure items.

Based on the index constructed, the study found that the level of HR accounting disclosure among the sampled companies was not more than 25% of the total items captured by the index. The study also found that HR accounting disclosure is significantly related to the size, profitability, and sector of the companies. The findings from Syed (2009) also reveal that HR accounting disclosure is not significantly connected with the age of a company.

Huang et al. (2008) observed that information on HC is often found in the internal reporting of organisations. The study further observed that certain information on human capital, like investment in human resources, has not consistently been reported in the annual reports. It is on this basis that the researchers examined the degree of HC disclosure in the audited accounts of top Malaysian companies. The investigation found that Malaysian companies were yet to accept the concept of HR accounting. Other findings from the study show that although information about training, employee skills, and competencies is reported, the return on investment in HR is not reported in the annual report.

Abeysekera and Guthrie (2005) studied the pattern of IC reporting in the annual reports of Sri Lankan companies. The researchers analysed the contents of the audited accounts from 1998/1999–1999/2000 of thirty listed reporting entities. The thirty companies were the top companies based on market capitalisation at the end of 1998 and 1999. The results from the study show that the most commonly reported type of IC is external capital, followed by HC. The results also show an improvement in IC reporting. The researchers observed that the individual items of IC being reported by listed companies in Sri Lanka are not the same as those reported in other countries.

In another study, Abeysekera and Guthrie (2004) observed that reporting entities are more involved in the development and measurement of non-financial information in the audited accounts as a result of the demand for different types of reports coming from stakeholders. Hence, the researchers developed HC disclosure items from prior studies and analysed the contents of annual reports of sampled companies in Sri Lanka to access the HR reporting practices. Findings from the study revealed no significant increase in the intellectual reporting practices by Sri Lankan companies.

The above empirical review shows that researchers have done a considerable amount of work on HR accounting. It is clear from the above review that there are few investigations into the linkage between HR accounting disclosure and FR quality. The shortage of literature on the relationship between HR accounting disclosure and FR quality is quite visible in the lack of studies that considered HR accounting disclosure and the qualitative characteristics of FR. For instance, in one of the recent studies that investigated the relationship between HR accounting disclosure and FR quality, Odunayo and Festus (2020) used the financial measures of FR quality. The study did not use the qualitative characteristics of FR quality that are capable of measuring both financial and non-financial aspects of financial reporting.

2.6.2 Financial reporting quality

The subsequent paragraphs are reviews of empirical studies on FR quality. These prior studies shed some light on the work of researchers in investigating FR quality and determining the contribution of various aspects of financial reporting to FR quality.

Alawaqleh and Almasri (2021) investigated the implications of the composition and performance of audit committees on the quality of FR of listed companies in Jordan. The researchers employed a questionnaire as a means of primary data collection for the study. The respondents in the study comprised members of audit committees, financial managers, and internal auditors working in the selected listed manufacturing companies. Then they used the qualitative characteristics of FR as measures of FR quality and used regression analysis to analyse the data.

The study found that both the composition and performance of the audit committee affected the standard of FR of the sample manufacturing companies. Alawaqleh and Almasri (2021) thus recommended that firms improve the composition and performance of their audit committees as important components of corporate governance in a bid to improve the standard of their financial reporting.

In their study, Albawwat et al. (2021) investigated the effects of the interactions of internal audit attributes on the standard of FR. The researchers used 193 copies of the questionnaire to collect the responses from internal auditors working for the reporting entities listed on the Amman Stock Exchange, Jordan. They also adopted the Beest et al. (2009) operationalisation of qualitative characteristics of FR as modified by IASB (2018) to measure the quality of FR and analysed the data using partial least squares structural equation modelling.

Amah and Ekwe (2021) investigated the influence of corporate governance mechanisms on the FR quality of pharmaceutical companies listed in Nigeria from 2006 to 2019. The study used data from the audited annual accounts of ten preselected companies. The study measured FR quality using the Dechew model and applied regression analysis to the data.

From the data analysis, the researchers discovered that the independence of the board and the number of board meetings by the risk management committee have a positive effect on FR quality. Board composition, ownership structure, gender composition, and the size of audit committee members have a significant positive association with FR quality. They also found that board meetings have a negative relationship with FR quality. The study by Amah and Ekwe (2021) recommends the adoption of the guidelines issued by CBN and SEC on corporate governance and regular supervision by regulatory agencies in a bid to improve the standard of FR quality.

Can (2021) investigated whether complying with the rules and regulations of Sharia by companies operating in Muslim majority countries helps in improving their FR quality. The author collected data from 2,300 firms in fifteen Muslim majority countries. The data covered the period from 2005 to 2017, resulting in 23,810 firm-year observations. The author then measured FR quality using discretionary accruals and audit effectiveness. Data analysis was by regression analysis. Findings from the study reveal that Sharia compliance has a positive impact on the FR quality of the companies studied. Can (2021) concluded that the findings reveal one of the differences in the behaviour of FR quality of Sharia-compliant companies and non-sharia-compliant companies.

Concerned about the tendency of the FR quality of firms to be influenced by multiple factors both from within and outside the firms, Ciocan et al. (2021) examined how microeconomic factors influence the FR quality of reporting entities listed in Romania. The researchers used data from the 2013–2019 audited accounts of the fifty-eight reporting entities in Romania. The researchers measured the standard of the FR of the sampled reporting entities, utilising both the fundamental and enhancing features of FR as proposed by Beest et al. (2009) and IASB (2018). Results from the data analysis show that large companies with a relatively low provision and more information disclosed, among other things, have a high quality of FR compared to those who disclose less information.

Based on the belief that a diverse board performs better in terms of enduring quality in FR, Dobija et al. (2021) investigated the connection between gender diversity and FR quality. Specifically, Dobija et al. (2021) investigated whether the inclusion of women on a company's board results in the production of a higher-quality financial report. Dobija et al. (2021) used three dimensions to measure FR quality: earnings management, timeliness, and auditor opinions; while diversity includes the number of female board members and female board chairmen (voice effect) in the selected companies.

Dobija et al. (2021) took a sample of 350 companies listed in Poland, forming an unbalanced panel by dropping one percent from the top and bottom of the list. The researchers also used secondary data from various sources, which included the financial statements of the chosen firms, the firms' websites, and LinkedIn pages. Following data analysis using regression analysis, Dobija et al. (2021) found that an increase in female board members results in improved FR quality. The researchers also found that appointing a female chair can lead to an improvement in FR quality in companies with an insufficient number of female members.

Garcia-Lacalle and Torres (2021) examined how online disclosure of information relates to the FR quality of the central government in Spain. From an initial sample size of 196, the researchers collected data from the final sample of seventy-seven central government agencies and used discretionary accruals to measure FR quality. For data analysis, the researchers used structural equation modelling (PLS-SEM). The results of the analysis reveal that pressure on public entities affects the online disclosure of financial information. Garcia-Lacalle and Torres (2021) concluded that FR quality leads to more online disclosure by Spanish public entities.

Guo et al. (2021) examined how non-traditional banking services impact the quality of FR of banks. The researchers collected data from call reports of US banks that covered 1993 to 2012. Then they measured FR quality by computing the discretionary component of the banks' loan–loss provision and measuring non-traditional banking activities as a ratio of income from nontraditional activities (non-interest income) to total income from operating activities, and finally ran a regression analysis on the data. The results of the investigation by Guo et al. (2021) do not indicate a significant increase in the FR quality of the banks due to their non-traditional activities.

Kaawaase et al. (2021) studied the association between the features of corporate governance proxied by board characteristics (which include the expertise of the board, its independence and how it performs), quality of internal audit and FR quality by using data from financial institutions in Uganda. The study covered sixty-two financial intuitions, which included banks and insurance companies regulated by Uganda's Central Bank and insurance regulatory agency. Kaawaase et al. (2021) collected data from key finance officers from the intuitions using questionnaires and applied regression analysis.

The results of the data analysis show that board expertise and performance are considerably and positively connected to FR quality. The findings from the investigation also show that internal audit quality has a significant positive association with FR quality, while board independence has no considerable association with FR quality. The study by Kaawaase et al. (2021) is one of the few studies that used qualitative features to measure the quality of FR.

Pae (2021) argues that one of the least studied by researchers is how career concerns by managers could influence FR quality. Therefore, the researchers investigated the effect of carrier concerns on FR quality by developing a model. The model developed by the researchers assumes that a risk-neutral manager makes efforts to cause the market value of the company to appreciate and, at the same time, impact the value of the manager. The model further assumes that the manager either under or over-invests efforts relative to the maximum efficiency level based on the manager's career concerns. The model is extended under certain conditions where a high level of FR quality motivates the managers to put in more effort. Under these conditions, managers, according to the model, prefer to have improved FR quality at some cost. This would continue until an equilibrium between FR quality and investment effort is achieved. The researchers noted that managers' career concerns are negatively connected with FR quantity.

Phornlaphatrachakorn and Kalasindhu (2021) analysed the impact of digital accounting on FR quality in Thailand and identified digital transformation as a moderating variable. The researchers used a questionnaire as a data collection tool. Respondents in the survey are accountants, finance officers, finance directors, and other accounting executives from the companies chosen. Data analysis was by structural equation model and multiple regression. Among other things, findings from the data analysis indicate that digital accounting has a sufficient impact on the quality of FR.

Shuraki et al. (2021) used data obtained from the audited accounts of 104 Iranian reporting entities listed from 20015-2019 to investigate the relationship between comparability, FR quality, and the opinion of the independent audit by employing multivariate regression analysis. The researchers measured accounting comparability using the De Franco et al. (2011) model. The researchers also measured FR quality using the Hutton et al. (2009) model (earnings quality). The results from the study reveal that both FR quality and accounting comparability have a negative relationship with audit opinion. Shuraki et al. (2021) concluded that the results imply that high accounting comparability and FR quality would lead to an increase in the probability of the issuance of an unmodified audit opinion.

Ud Din et al. (2021) examined the association between the proficiency of having a female chairperson of a board's audit committee and FR quality and how the proficiency of a female chairperson of the audit committee moderates the relationship between internal control and FR quality. The researchers derived data from the audited accounts of 302 reporting entities listed in Pakistan between 2010 and 2016. The researchers concluded that female chairpersons of audit committees enhance FR quality more than male chairmanship. They also concluded that the accounting proficiency of female audit chairpersons improves corporate governance mechanisms.

Almaqtari et al. (2020) explored the impact of corporate governance on the quality of FR prepared under the Indian accounting standards using a sample of ninety-seven listed reporting entities in India. The researchers measured corporate governance mechanisms using certain attributes like board size, independence, audit committee size, and attributes, among others. FR quality was measured using Mc Nichols's (2002) model and OLS regression for data analysis.

One may ask whether anti-corruption campaigns by various governments around the world have an impact on the quality of FR or not. One such effort is the promulgation of a rule prohibiting government officials from being appointed as directors of public companies. To find answers to such questions, Hope et al. (2020) investigated the effect of the anti-corruption campaign by the Chinese government on firm-level FR quality. The researchers found a significant improvement in the FR quality of the selected firms after the promulgation of

Chinese Rule 18. They concluded that anti-corruption campaigns lead to an improvement in FR quality, and the effect is that more companies are not owned by the state.

Irwandi and Pamungkas (2020) tried to identify the determinants of FR quality. Therefore, the researchers investigated the effects of risk of litigation, investors’ distrust, and the expertise of the company’s audit committee on the FR quality of manufacturing reporting entities listed in Indonesia. They collected secondary data from 2015 to 2018 annual reports of 287 public companies and used moderated regression analysis to study the data. Findings from the data analysis show that investors’ distrust and risk of litigation have effects on the quality of FR, while the legal expertise of the audit committee strengthens the association as a moderating variable.

Isidro et al. (2020) studied the interrelationship among country-specific factors associated with FR quality. The authors investigated country attributes related to FR quality from a sample of thirty-five countries. The study concluded that twenty-one country attributes are linked to mandatory IFRS adoption in the various countries and that seventy-two country attributes are attributable to four main factors. The study also called for more empirical research into FR quality at the international level.

Krishnan et al. (2020) examined the effect on the FR quality of the regulations enforced by the Sarbanes-Oxley Act on the internal audit functions of small firms in the US. The researchers measured FR quality using discretionary accruals in the research.

The study by Kythreotis and Constantinou (2020) is one of the recent works on the IASB (2018) conceptual framework of FR. Kythreotis and Constantinou (2020) investigated the extent to which IFRS adoption led to higher quality FR in fifteen European countries. The researchers measured FR quality using the IASB's conceptual framework for FR, which is the qualitative features of FR. The work by Kythreotis and Constantinou (2020) brought out the conflicts between the methods used in measuring reliability in many studies and the definition of reliability in the IASB's conceptual framework. Furthermore, the researchers tested the association between corruption and FR quality.

They collected secondary data from the listed companies in fifteen developed countries in Europe. The period of the research covered ten years. The authors used descriptive statistics to understand the data regression to study the linkage between the variables. Kythreotis and Constantinou (2020) found that the adoption of IFRS has resulted in an improvement in the FR quality of the sampled reporting entities as envisaged by IASB (2018). The researchers also noted a considerable increase in the relevance of information disclosed in the audited accounts of the period after IFRS adoption. They also noted an insignificant increase in the reliability of information disclosed in the audited accounts in the period following the adoption.

Integrated reporting is an emerging area in financial reporting (Adegboyegun et al., 2020; Plotnikov & Plotnikova, 2020; Ofoegbu et al., 2018). Despite the proclamation that integrated reporting can revolutionise FR (Adegboyegun et al., 2020), Muttakin et al. (2020) contend that it can only be possible if integrated reporting can provide firms with some tangible benefits. It is on this premise that Muttakin et al. (2020) investigated whether integrated reporting has a relationship with the cost of debt. The researchers also investigated whether integrated reporting moderates the association between FR quality and the cost of debt.

To achieve the aims of their study, Muttakin et al. (2020) developed a model linking the cost of debt with integrated reporting and FR quality. The researchers used the model to analyse data sourced from non-financial firms listed in South Africa from 2009 to 2015, with a total of 847 firm-years. From the analysis, the researchers found that reporting entities that produce integrated reports tend to portray lower costs of debt compared to other reporting entities that do not produce such reports. The findings also show that there is a negative association between financial reporting and the cost of debt. The study concluded that the debt market reacts more quickly to information in integrated reports than it reacts to information in traditional financial reports.

Rashid (2020) explored the impact of having professional accountants in top-level management teams on the FR quality of listed reporting entities in Bangladesh. Rashid (2020) measured FR quality using a modified Beest et al. (2009) operationalised qualitative characteristics of FR to construct a financial reporting index of 351 listed reporting entities. The author extracted data from the 2015 and 2016 audited accounts and reports of the reporting entities. The investigator conducted a regression analysis of the data and found that professional accountants' presence has a significant positive relationship with FR quality. Rashid (2020) also found that the companies provide higher quality-enhancing qualitative information compared to fundamental qualitative information.

Seiyaibo and Okoye (2020) investigated the linkage between FR quality and company characteristics of listed manufacturing entities in Nigeria. The researchers used the qualitative characteristics of FR to measure FR quality and used firm size, board size and independence, ownership by institutional investors, and the opportunity to grow as company characteristics. The researchers collected data from preselected forty-eight listed manufacturing entities out of the population of fifty-four companies listed under the manufacturing sector of the NSE.

Using an ex-post factor research design, Seiyaibo and Okoye (2020) ran a correlation OLS regression on the data. The results from the analysis show a significantly positive linkage between FR quality and board size. However, the results reveal no linkage between FR quality and the size of the entities, institutional ownership, independence of the board, or the opportunity for growth.

Tran et al. (2020) investigated how accountability mediates the association between the FR quality of firms and their performance using data from public reporting entities operating in Vietnam. To achieve the objectives of the research, Tran et al. (2020) surveyed the opinions of 177 accountants and managers employed in the Vietnamese public reporting entities. They used thirteen qualitative characteristics of FR to assess the degree of FR quality and a sevenitem scale to measure organisational performance. Accountability was measured in the study using a fourteen-item scale covering both public accountability and financial accountability.

Tran et al. (2020) conducted a regression analysis of the data. From the data analysis, the study found that the connection between FR quality and organisational performance is mediated by accountability. The results further show that the mediating role of accountability is significant for public sector organisations trying to increase both FR quality and organisational performance. This means that designing a better accountability system can lead to improvement in FR quality and performance.

Wati et al. (2020) investigated how political connections, the efficiency of board members, the audit committee, and external audit quality affect FR quality. The researchers used a total of 871 observations from the audited reports and accounts of listed reporting entities in Indonesia. The audited accounts and reports covered the financial years 2005 to 2017. The authors used discretionary accruals (Jones model) to measure FR quality and analysed the data using regression analysis. The researchers discovered that the FR quality of reporting entities that have political connections is below that of reporting entities that have no political connections. Therefore, Wati et al. (2020) concluded that FR quality is negatively connected with political connections.

Arthur et al. (2019) examined the influence of firms’ ownership concentration in a country on FR quality across the country. The researchers constructed what they described as a “comprehensive index” for measuring a country's FR quality (p. 104). They also constructed an index that combines accounting indicators as well as auditing indicators of FR quality. The researchers also used data from thirty-six countries and used regression statistics on the data. Arthur et al. (2019) discovered that there is a linear relationship between a country’s FR quality and the corporate ownership structure in that country.

Ballaset al. (2019) explored the extent of the influence of IFRS and corporate governance practices and how the adoption of IFRS supported by corporate governance affects the FR quality of banks in Greece using secondary data from 2008 to 2011. The researchers collected the data from the annual reports of fourteen commercial banks and used multivariate regression analysis to study the data. The findings from the data analysis reveal that both IFRS and corporate governance practices significantly and positively affect the quality of the FR of Greek banks.

Bratten et al. (2019) studied the relationship between audit firm tenure, bank complexity, and

FR quality. The researchers found a positive relationship between the tenure of audit firms and FR quality. They further discovered that a positive connection between audit firms' tenure and FR quality is strong among banks with complexities.

Elliott et al. (2019) researched to find out whether investors consider the level of FR quality in their investment decisions. The researchers used accounting students as proxies for investors and served as the research participants. At the end of the research, The researchers concluded that investors consider FR quality in their investment decisions. Therefore, investors attribute value to higher FR quality.

Habib et al. (2019) examined how IFRS adoption affects FR quality and cost of equity and whether the influence of adopting IFRS differs based on the life cycle of the reporting entity. The researchers collected secondary data for the study from listed companies in Australia. The data came from 7,915 firm-year observations divided into two time periods: pre-adoption (2001–2005) and post-adoption (2006–2012). The authors used earnings management with the Kothari model to measure FR quality. From the regression analysis, Habib et al. (2019) found an inverse relationship between FR quality and the reporting entity's cost of equity in the period after adopting the IFRS. They also observed a reduction in the FR quality after adopting IFRS, which led to an increase in the cost of equity of the sampled reporting entities. Habib et al. (2019) further found that FR quality in the period after the adoption of IFRS improved the cost of capital. Additionally, Habib et al. (2019) observed that more established reporting entities show improved earnings quality, which results in a lower cost of capital.

Ibrahim and Abubakar (2019) explored how the characteristics of boards influence the quality of the FR of Nigerian banks. Using secondary data from the annual reports of fifteen selected banks listed on the NSE from 2007 to 2018, the researchers conducted a regression analysis of the data. In measuring the variables, the researchers measured FR quality by employing discretionary accruals. From the findings of the data analysis, Ibrahim and Abubakar (2019) found that the two proxies used for board attributes have an insignificant positive influence on the FR quality of Nigerian banks. They called on regulators to issue regulations that will improve corporate governance among banks to strengthen the quality of FR in the banking sector of the economy.

Ma et al. (2019) examined the influence of the academic experience of managers on FR quality. The researchers tried to find out whether appointing management personnel with academic experience results in better FR quality. They used data from China to successfully conduct the research. They measured FR quality using accruals and earning management models. The researchers discovered a link between managerial personnel's academic experience and FR quality.

Omoro (2019) evaluated the influence of voluntary disclosure on the FR quality of reporting entities using data collected from ten years of management reports of fifty-five Kenyan corporations. The researchers used accounting methods, accounting policies, and voluntary disclosure as the proxies of discretionary accounting. They used relevance, faithful representation, understandability, and timeliness as measures of FR quality. The researchers analysed the data using regression analysis and found that discretionary disclosure has a significant positive relationship with FR quality as it impacts positively on the qualitative features of accounting information.

Haven observed that theoretical models in prior studies have established a connection between chief executive officers' skills and the size of the firm, Rubin and Segal (2019) introduced a new measure of a director's expertise. The investigation by Rubin and Segal (2019) reveals that the new measure of board skill is positively connected to monitoring quality. The researchers further show that the board has an impact on monitoring and its outcomes.

The paucity of systematic research about the interactions that exist between FR quality and non-financial performance of reporting entities motivated the study by Al-Dmour et al. (2018).

The empirical study by Al-Dmour et al. (2018) is a study on the association between the FR quality and non-financial performance of public reporting entities listed in Jordan. Therefore, the researchers investigated how non-financial performance proxied by demographic features (type, size, and experience of the reporting entities) affects FR quality proxied by relevance, understandability, and faithful representation. They administered a questionnaire to 239 respondents to collect data for the study. Results from the data analysis by Al-Dmour et al. (2018) show that the components of non-financial performance have a significant influence on FR quality. The researchers concluded that the variation among the sampled firms was a result of firm size and experience.

Alshetwi (2018) investigated how the independence of a board influences the FR quality among listed non-financial companies in Saudi Arabia. The study by Alshetwi (2018) used a sample of 417 companies. The author sourced secondary data from the 2013 to 2016 audited accounts of the preselected companies and applied abnormal accruals to measure FR quality. The author enhanced the validity of the abnormal accruals with earnings persistence. The study by Alshetwi (2018) found that the independence of a board does not influence improvement in FR quality among the sampled companies. Alshetwi (2018) concluded that his study is a confirmation that corporate governance gives different results in environments “with structural and organisational biases, such as when firms are controlled by CEOs and top management” (p. 17).

In their study, Rossi et al. (2018) studied the new way of disclosing intellectual capital information online by universities in Italy. The authors examined the determinants of online IC disclosure in Italian universities selected for the study and analysed the data using the OLS regression model. Rossi et al. (2018) found that there was extensive use of universities’ websites for intellectual-capital disclosure and that this trend has had positive effects on the intellectual capital of these universities by giving online visibility at both national and international levels.

Nikbakht and Khanbeigi (2018) studied the effects of corporate governance on FR quality using twelve models of FR quality and four proxies of corporate governance. The researchers used data extracted from the 2006 to 2013 audited accounts of 102 reporting entities listed in Iran and used structural equation modelling and the partial least squares method for data analysis. The results of the data analysis revealed a significant association between two proxies of corporate governance (audit and ownership structure) and FR quality. Thus, Nikbakht and Khanbeigi (2018) concluded that corporate governance significantly affects the FR quality of reporting entities.

Nirwana and Haliah (2018) retested the determinants of FR quality by adding three more factors. The researchers drew samples from Indonesian local governments. The findings from the data analysis revealed that all the three factors (personal, system/administrative, and political factors) added by Nirwana and Haliah (2018) affected the quality of FR of the selected local governments.

Onyabe et al. (2018) investigated the impact of the tenure of members of the audit committee on the FR quality of listed Nigerian banks. The study involved studying ten years of data collected from the financial statements of fourteen banks. The researchers measured FR quality by adopting the modified Jones model and making alterations to the working capital model. The researchers used the mean tenure of the members of the committee as the measure of audit committee tenure. Onyabe et al. (2018) noted a weak connection between the tenure of members of the audit committee and FR quality.

One of the arguments for the issuance of IFRS is that the new set of accounting standards would lead to an improved quality of FR (Osasere & Ilaboya, 2018). It is on this basis and the difficulty of measuring the quality of FR in research that Osasere and Ilaboya (2018) examined the changes in the level of FR quality of banks in Nigeria due to the adoption of IFRS. In other words, Osasere and Ilaboya (2018) examined the results of adopting IFRS concerning improvement in the FR quality of banks in Nigeria. The researchers operationalised the qualitative features of FR and measured the quality of the FR of the banks. They conducted a census of all the listed MDBs in Nigeria and used the Mann-Whitney test on the data extracted from the audited accounts of the banks. The results of the data analysis reveal that the FR quality level of the banks has significantly improved after the adoption of IFRS. Osasere and Ilaboya (2018) further noted that the improvement in FR quality cut across all the five components of FR quality assessed in their study. Osasere and Ilaboya (2018) concluded by arguing that the use of the characteristics of financial reports as a measure of FR quality is a complete departure from the commonly used “accrual model which is an indirect” proxy of FR quality (p. 30).

Akeju and Babatunde (2017) show how corporate governance influences the quality of the FR of listed reporting entities in Nigeria. The researchers used secondary data obtained from the 2006–2015 annual reports of forty listed reporting entities. Akeju and Babatunde (2017) used attributes of the board (independence and size), audit committee, and growth as proxies of corporate governance; and measured FR quality using the McNichol (2002) model. Results from the multiple regression analysis indicate that corporate governance is positively associated with the FR quality of listed reporting entities in Nigeria.

Echobu et al. (2017) explored the determinants of FR quality among agricultural and natural resource reporting entities listed in Nigeria. The researchers used a sample of seven out of the nine listed firms. They collected data extracted from the 2008–2015 audited accounts of the preselected reporting entities. The researchers also used the modified Jones model to measure FR quality and used regression analysis for data analysis. Findings from the research by Echobu et al. (2017) indicate that FR quality is significantly and positively related to leverage, liquidity, and board size.

Dewata et al. (2016) look into the influence of corporate governance mechanisms on FR quality and the financial performance of government-controlled business reporting entities. The researchers collected data from a sample of fifty state-owned listed reporting entities in Indonesia. The data was collected from 2010 to 2014 audited accounts of the reporting entities preselected for the study. The results of the regression analysis by Dewata et al. (2016) reveal that only audit committee effectiveness impacts significantly on the quality of FR, while the remaining proxies do not significantly impact the quality of FR. The results further show that the size of the board, together with the effectiveness of its audit committee, significantly affects financial performance. On the contrary, the independence of the board and government ownership have a significant negative effect on financial performance.

Justus and Christopher (2016) investigated the influence of HC development on the quality of FR of NGOs. Justus and Christopher (2016) drew samples from non-governmental organisations (NGOs) in the Gulu district in Kenya and used a cross-sectional study. The researchers collected primary data from sixty respondents using a questionnaire and analysed the data by applying Pearson correlation analysis.

From the results of the data analysis, Justus and Christopher (2016) observed a significantly positive association between human capital development and the quality of FR. Therefore, the study concluded that education, training, knowledge, experience, skills, personality, and so on positively influence the quality of FR. The study recommended that NGOs train and develop their employees and help their accounting staff to join professional accounting bodies.

Mbobo and Ekpo (2016) studied the views of accountants about the level of quality of FR of reporting entities in Nigeria. The researchers surveyed the opinions of accountants by distributing one hundred copies of a structured questionnaire designed to capture responses based on the qualitative characteristics of the FR issued by the IASB. The results from the data analysis by Mbobo and Ekpo (2016) indicate that professional accountants in Nigeria are of the view that relevance and faithful representation have a significant positive influence on FR quality. The study recommended training of accountants on IFRS and further research on FR quality using the qualitative characteristics.

Nwaobia et al. (2016) examined the influence of financial reporting on investors' decisions using data extracted from the 2010–2014 financial reports of ten manufacturing firms listed in Nigeria. The researchers measured FR quality using the Mac Nichols (2002) regression matrices and OLS to analyse the data. Based on the results, the study concluded that FR quality significantly influences investors' decisions positively.

Onuorah and Imene (2016) evaluated the interaction among the proxies of corporate governance and FR quality in some firms in Nigeria by using secondary data from the 2006 to 2025 financial statements of sampled firms. The researchers used the structure and experience of the board, and audit quality as proxies of corporate governance. After conducting an econometric analysis of the data, the study found that there is a correlation between the indicators of corporate governance and FR quality. Onuorah and Imene (2016) recommended enhancements in corporate governance to improve the quality of FR.

Aderin and Otakefe (2015) studied the effect of adopting IFRS on the FR quality of reporting entities operating in Nigeria. The researchers used three proxies of FR quality to compare the levels of FR quality before and after the adoption using regression analysis. The study used data extracted from the audited accounts of twenty-three listed reporting entities and covered a period of four years. From the data analysis, Aderin and Otakefe (2015) observed that adopting IFRS has significantly improved the quality of FR in the reporting entities and reduced the level of earnings management. Therefore, the study recommended the adoption of IFRS.

Chiang et al. (2015) examined how corporate social responsibility (CSR) influences FR quality and the mediating effect of corporate governance. The researchers used data from 221 United States corporations in the 2009–2011 editions of the 100 Best Corporate Citizens list and used a regression model for data analysis. Empirical results from the study indicate that CSR reduces earnings management and improves the quality of FR.

Lin et al. (2015) studied the connection between investment decisions and the FR quality of family businesses against non-family businesses. The researchers used the classical agency theory and behavioural agency theory to underpin their argument for the research, which hypothesised that the roles of FR quality on investment decisions vary from family businesses to non-family businesses. Lin et al. (2015) used a list of preselected listed reporting entities in Taiwan from 1996–2011.

Kythreotis (2014) studied the extent to which IASB has to achieve higher FR quality through the issuance of accounting standards and a conceptual framework. The author measured FR quality using the “fundamental qualitative characteristics of financial reporting” (p. 4). To determine whether relevance and faithful representation have increased after implementing the IFRS reporting system, Kythreotis (2014) utilised ten years of data from the audited accounts of fifteen reporting entities in Europe. The financial statements covered the period 2000 to 2009, with the years 2000 to 2004 being the pre-adoption of IFRS in the countries, while 2005 to 2009 is the post-compulsory adoption of IFRS in the selected countries. The results from the regression analysis show improvement in relevance as a characteristic of the financial report, while faithful representation remained static.

Martínez-Ferrero (2014) studied the impact of FR quality on firm performance. The study used three measures of FR quality, namely: accounting conservatism, quality of accruals and earnings management, and measured financial performance with the market to book ratio. The study also used secondary data from 1,960 listed companies in twenty-five countries and simultaneous equations on the panel data for analysis. The period of observation covered 2002 to 2010. Findings from the data analysis indicate that FR quality and financial performance are positively related. The findings further show that the level of corruption perception, IFRS adoption, accounting system, and affluence moderate the association between FR quality and financial performance.

Agyei-Mensah (2013) observed that the qualitative features of FR are the essential ingredients that enable the production of useful information in the annual financial reports. Therefore, the researchers investigated the quality of FR issued before adopting IFRS and the FR quality after adopting IFRS by reporting entities in Ghana. The researchers also examined the effect of the features of reporting entities on the quality of information reported in the audited accounts of listed Ghanaian reporting entities. They collected data from the audited accounts of the sampled listed reporting entities for the year 2006 for the period before adopting IFRS, and for the year 2008 for the period after adopting IFRS. Then they applied descriptive statistics and regression techniques to the data.

From the data analysis, Agyei-Mensah (2013) determined that the level of FR quality in the period of adoption of IFRS was 76.8%. However, this has increased to 87.09% in the postperiod after the adoption. Therefore, the study concludes that the FR quality of listed Ghanaian firms has improved significantly because of the adoption of IFRS and that the firms have complied with the IASB's framework for financial reporting. Furthermore, Agyei-Mensah (2013) found that firm characteristics (proxied by firm size, measured using net assets and the type of auditor) are significantly positively related to FR information quality. The study also observed that the improvement in FR quality due to the adoption of IFRS is an assurance to the users of financial reports of relevant and reliable information for financial decisions.

Atanasovski (2013) investigated how the various corporate features impact the quality of the

FR of listed Macedonian reporting entities. The researchers used secondary data from the year 2010 annual reports of thirty-two companies to construct an unweighted FR quality index of fifty-one disclosure items. The researchers then used regression techniques to examine the impact of each of the various corporate attributes (which include company size, industry type, ownership structure, leverage, and type of audit firm) on the index. The study concludes that company size, industry type, leverage, and type of audit firm significantly impact the quality of FR.

He et al. (2013) conducted a review of prior empirical studies on the association between corporate governance mechanisms and FR quality. The researchers reviewed two often used measures of corporate governance: board and audit committee characteristics. At the end of the synthesis, the study concludes that board independence is the most potent deterrent against manipulation of financial reports and that it is a major factor in determining FR quality.

Nyor (2013) examined the quality of FR on Nigerian firms from the viewpoint of users of financial reports. The investigator utilised a research questionnaire for data collection from seven groups of users of financial reports with a minimum academic qualification of a first degree or Higher National Diploma (HND). The investigator randomly distributed one hundred copies of the research questionnaire and gathered data from all the respondents. He then used seven qualities of accounting information (qualitative characteristics of FR) as proxies for FR quality, using the Chi-Squire for testing the hypotheses of the study. Findings from the results of the test reveal that the FR quality of Nigerian firms is moderate. The study recommends that Nigerian firms try to improve the quality of their FR.

Lin et al. (2012) under pined their argument on the signalling theory and the stakeholder theory to examine how knowledge intensity regulates the connection between HC disclosure and organisational performance. The authors aimed at demonstrating the positive impact of HC and organisational performance and the boundary limits of the relationship between the two variables. Lin et al. (2012) used a content review of financial statements for data collection and applied hierarchical regression on the data. Lin et al. (2012) found that HC significantly and positively influence the organisational performance of the selected reporting entities as it impacted two proxies of organisational performance. However, the results show that the size of the reporting entity inversely regulates the association between HC disclosure and organisational performance, while knowledge intensity regulates the connection between HC and performance positively. The research by Lin et al. (2012) proved the linkage between HC disclosure and the performance of reporting entities theoretically and empirically.

McDermott (2012) investigated the impact of FR quality in the determination of investment in CSR. McDermott (2012) used the quality of accruals as a proxy for FR quality measured using the Dechow and Dichev (2002) model supplemented by the modified Jones (1991) model. McDermott (2012) discovered a negative connection between FR quality and CSR investment among companies with probable over-investment in CSR.

The results from McDermott (2012) further show a positive association between CSR investment and the probability of reporting entities with a high level of FR quality and an inverse association between CSR investment and profitability among reporting entities with a low level of FR quality. McDermott (2012) established that a higher FR quality level will lead to the higher efficiency of CSR investment.

Chen et al. (2011) pointed out that prior investigations discovered a positive relationship between efficiency in investment and FR quality among listed reporting entities in the United States (USA). This made the researchers examine the association between FR quantity and the efficiency of investment in private reporting entities in developing nations. The researchers used the World Bank’s Survey from 2002 to 2005 for data collection. Judging from the results of the data analysis, The study concludes that FR quality has significantly positively related to the quality of investment efficiency.

Rainsbury et al. (2009) examined the influence of audit committee quality on FR quality and audit fees in locations where there are no regulations on audit committees. To successfully conduct the study, the researchers used a sample of eighty-seven reporting entities out of a population of all listed reporting entities in New Zealand, where they collected data extracted from the 2001 audited accounts of the reporting entities. At the time, there were no regulations on the audit committee as part of the listing rules. After analysing the data using regression analysis, The researchers observed that the quality of the audit committee significantly influences the FR quality of reporting entities, but it does not influence the level of audit fees significantly.

The effect of the quality of accounting information on the company's cash holding was the target of the study by García-Teruel et al. (2008) used data extracted from the audited accounts of reporting entities listed in Spain from 1995 to 2001. Adopting the quality of accruals to measure accounting information quality, the researchers found that reporting entities that show evidence of higher accrual quality tend to hold a lower level of cash compared to companies with poor accruals quality.

Han (2004) investigated how ownership structure affects the quality of FR of listed companies. The study used data from the Compact Disclosure database. The data covered the period 1997 to 2001 and used the earnings quality by applying the modified Jones (1991) model and Dechow and Dichev's (2002) model to measure the level of FR quality. From the findings from the data analysis, the author concluded that managerial control is negatively correlated with FR quality, whereas institutional control is positively correlated with FR quality.

2.6.2.1 Measuring the quality in empirical research

Beest et al. (2009) provide a novel work on the qualitative characteristics of FR quality. After IASB (2008) published its framework on FR, Beest et al. (2009) set out to operationalise the elements of the features of FR. The study shows how to operationalise the elements of the qualitative characteristics of FR by constructing a compound measurement tool. The researchers went ahead and used the measurement tool to assess the fundamental as well as the enhancing features of FR. They applied the twenty-one-item index to assess the FR quality of 231 companies listed on stock exchanges in two European countries and the United States from 2005–2007. Before applying the developed measurement technique, Beest et al. (2009) tested the tool for validity and reliability. The researcher used Krippendorff's alpha to check the instrument for internal and inter-rater validity. They used Cronbach's alpha to check the internal consistency. At the end of the research, the study concludes that the development of the tool to operationalise the qualitative characteristics of FR is a contribution to research on FR quality as demanded by FASB and IASB.

From all indications, the work by Beest et al. (2009) has paved the way for more empirical research on FR quality using the qualitative characteristics of FR. Researchers have conducted many studies using the tool Beest et al. (2009) developed with and without modifications. Some of the studies that adopted the tool include Albawwat et al. (2021), Ciocan et al. (2021), Rashid (2020), Omoro (2019), Mahboub (2017), Mbobo and Ekpo (2016), and Tasios and Bekiaris (2012).

Omoro (2019) studied the association between choices in discretionary accounting policies, discretionary disclosure and the FR quality of Kenyan government-controlled commercial enterprises. The study adopted the qualitative characteristics of FR in assessing the level of FR quality of the selected enterprises. In another research, Mbobo and Ekpo (2016) assessed the level of FR quality by sampling the opinions of 120 professional accountants in Nigeria. The work by Mbobo and Ekpo (2016) demonstrated how the qualitative characteristics of FR can be operationalised using a questionnaire. The questionnaire developed by Mbobo and Ekpo (2016) reflects the six elements of the qualitative characteristics of FR.

Mahboub (2017) also used the operationalised qualitative characteristics of FR to conduct a study on the likely determinates of the FR quality of twenty-two Lebanese banks. The author obtained data from eighty-eight annual reports of the selected banks. He then constructed an FR quality index with forty items. The index was structured based on the operationalised qualitative characteristics of FR.

Another study that used the qualitative characteristics of FR is Tasios and Bekiaris (2012). The researchers examined the FR quality in Grace by analysing the auditors' perceptions. Tasios and Bekiaris (2012) used the population of all the members of the Certified Public Accountants (CPAs) in Grace, which "according to the records of the Hellenic Institute of Certified Public Accountants (HIPCA)" stood at 738 (Tasios & Bekiaris, 2012 p. 62). To collect data from the respondents, they developed a questionnaire using the measurement items constructed by Beest et al. (2009).

Some prior studies used other methods of measuring FR quality. For example, Salvador de Souza et al. (2019), Mahmoud (2017), and Nwaobia et al. (2016) are among the prior studies that used other methods of measuring FR quality. One of the other methods of measuring FR quality includes McNichol's model used by Akeju and Babatunde (2017) and Nwaobia et al. (2016). Another method of measuring FR quality not dependent on the qualitative characteristics of FR is Jone's model used by Salvador de Souza et al. (2019).

Analysis of all the other methods of measuring FR quality (accrual models, value relevance models, McNichol's model, Jone's model, and so on) shows that the methods are suitable for use with secondary data only. One of the advantages of the operationalisation of the qualitative characteristics of FR is that it can be used with primary and secondary data. For instance, Mbobo and Ekpo (2016) and Tasios and Bekiaris (2012) demonstrated how to adopt primary data in measuring FR quality using qualitative characteristics. On the other hand, Mahboub

(2017) and Beest et al. (2009) have demonstrated how to adopt secondary data in measuring FR quality using qualitative characteristics. In addition, qualitative characteristics as a measure of FR quality can measure the financial and non-financial elements of FR (Beest et al., 2009). The other measures of measuring FR quality "have several weaknesses as they only concentrate on financial information disclosed in statements of financial position and they are not capable to assess financial reporting quality comprehensively" (Mahboub, 2017, p. 714).

2.6.2.2 Accounting disclosure and financial reporting quality

Despite the shortage of literature on the study of HR accounting disclosure and FR quality, there are many studies on some aspects of accounting disclosure information and FR quality. Some of these prior studies examined the relationship between environmental accounting, various aspects of corporate governance, CSR, and FR quality, among others. Two examples of such studies are Fakoya and Lawal (2020) and Salvador de Souza et al. (2019).

Fakoya and Lawal (2020) examined how environmental accounting influences the quality of accounting disclosure of shipping companies in Nigeria. The study used data from the selected staff of shipping companies in Nigeria and analysed the data using a regression technique. Findings from the research reveal that environmental accounting has a significant positive effect on the quality of accounting disclosure in shipping companies in Nigeria.

Salvador de Souza et al. (2019) investigated the association between CSR information and FR quality. Using a sample of 1,181 reporting entities in Brazil. The investigation covered the audited accounts of the preselected reporting entities from 2012 to 2016. Salvador de Souza et al. (2019) sought to find out whether socially responsible companies had better FR quality. Although Salvador de Souza et al. (2019) discovered that socially responsible companies behave differently in their financial reporting, the findings from the research show that CSR disclosure is insignificantly and positively connected with FR quality.

2.7 Hypothesis Development

Four hypotheses have been developed to ensure the achievement of the objectives of this study. The hypotheses are derived from the literature with support from the underpinning theories. Hypothesis one is about the relationship between HR accounting and FR reporting quality. Hypothesis two is about the contribution of HR accounting disclosures to the improvement in FR quality. Hypothesis three is about the reasons for not recognising the value of HR on the balance sheet. Lastly, hypothesis four is about the main problem of HR accounting in Nigeria.

2.7.1 Hypothesis one

The human capital theory has been used in many studies to underpin human resources' importance in achieving organisational goals. The theory describes the position of human resources as an essential factor that manipulates the other resources of an entity to achieve corporate objectives (Oladele et al., 2018; Jesuwunmi et al., 2017). The significance of human resources makes many firms refer to their human resources as the most critical assets at their disposal (Fulmer & Ployhart, 2014).

The RBV theory is often held to show that human resources are a unique and unduplicated asset of organisations, which helps the organisations achieve competitive advantage (Alalie et al., 2018; Liang & You, 2009). This position implies that information about human resources will influence investment and other decisions. Therefore, proving such information is helpful to the stakeholders. When such information is presented via the financial reports, the valuerelevance of the accounting information will be strengthened.

Financial reporting serves as a means through which accounting information gets to the stakeholders of reporting entities (Musa, 2019; Mbobo & Ekpo, 2016). Providing valuable and timely information to decision-makers is a fundamental task in financial reporting. (MartinezFerrero, 2014; Tasios & Bekiaris, 2012). Therefore, boosting FR quality will improve financial information quality and decision-making (Tasios & Bekiaris, 2012). Improvement in FR quality is in line with the concept of financial reporting and the stakeholder theory.

FR quality "requires companies to voluntarily expand the scope and quality of the information they report to ensure that market participants are fully informed to make well-grounded decisions on investment..." (Martinez-Ferrero, 2014, p.54). Given that the current accounting standards do not mandate companies to provide HR accounting disclosure (Akeju & Babatunde, 2017; Kaur et al., 2016; Ogenyi & Oladele, 2015), HR accounting disclosure is, to a large extent, a voluntary disclosure (Wyatt & Frick, 2010). The research hypothesises that there is a positive relationship between information from HR accounting and FR quality. Therefore, hypothesis one is stated below in the null form.

(1) **H_0** -There is no significant positive relationship between HR accounting disclosure and FR quality.

2.7.2 Hypothesis two

The conflict between theory (human capital theory, RBV theory, and stakeholder theory) and conventional accounting practice regarding human resources is apparent. As discussed in 1.2, conventional accounting practice does not treat investments in HR as assets like other investments (Bonsu et al., 2019; Ojokuku & Oladejo, 2017; Arkan, 2016; Oprean & Oprisor, 2014). Therefore, in conventional accounting, HR value is not recognised as an asset on the balance sheet. An investment in HR is classified as an expense in the year a reporting entity incurs the expenses. (Bonsu et al., 2019; Ojokuku & Oladejo, 2017; Mara et al., 2016; Oprean & Oprisor, 2014).

The position of accountants on the traditional treatment of investment in HR has not changed as conventional accounting fails to incorporate HR accounting into financial reporting. However, empirical studies and existing theories that support the view that HR is an asset are abundant. Many studies have reported that HR accounting positively affects firms' performance (Khan, 2021; Oladele et al., 2018; Amahalu et al., 2016). Empirical results from prior studies revealed that HR performance and accounting influence firms' performance positively. Results from Ogbodo and Egbunike (2016) show evidence supporting the existence of a significant positive association between HR performance and firm performance. Adebawojo et al. (2015) revealed that HRA has a significant positive impact on the performance of banks. The results from Odunayo and Festus (2020) revealed that HR accounting positively influences the FR quality of oil and gas companies in Nigeria. Findings from these studies indicate that HC plays a vital role in organisations. Therefore, the findings support the prepositions of the HC theory and the RBV theory. As disclosed in sections 2.2.1 and 2.2.2, HC theory asserts that human capital is a crucial factor in the determination of the success of any firm (Bello & Egbe, 2021; Odunayo & Festus, 2020; Samuelson & Marks, 2012).

This study, judging from the numerous empirical studies supporting the contribution of HR accounting to both the financial and non-financial performance of firms and their positive effects on share prices, postulates that HR accounting disclosure contributes to FR quality. Because of the empirical evidence and support from theory, this study further hypothesises that professional accountants, irrespective of their type of employment, would agree that HR accounting disclosure improves the quality of FR. Thus, hypothesis two is stated below in the null form.

(2) **H_0 -** There is no significant difference among accountants that HR accounting disclosure improves the quality of FR.

2.7.3 Hypothesis three

One of the distinctions between conventional and HR accounting is that conventional accounting does not recognise human resources assets in the balance sheet (Bonsu et al., 2019; Arkan, 2016). Excluding investment in human assets from the balance sheets of reporting entities conforms to the current accounting standards (Bonsu et al., 2019; Oprean & Oprisor, 2014). Some researchers have advanced conflicting reasons for not recognising the value of HR on the balance sheet (Bonsu et al., 2019). The literature reported some factors responsible for not recognising the value of HR on the balance sheet. The factors include sensitivity of HR data, which many firms will not like to disclose to the public; problems associated with measurement and valuation of HR; the absence of accounting standards; and differences in labour law (Bonsu et al., 2019; Arkan, 2016).

Accounting concepts and conventions like the money measurement concept and conservatism preclude the recognition of items that cannot be measured in monetary terms with certainty. Therefore, the lack of an acceptable valuation model accounting standard for human resources is a serious concern for accountants. These concerns and the conservative nature of accounting tend to place it in contrasting positions with existing theories like the human capital theory, the resource-based view, and the stakeholder theory.

Because of the available evidence in the literature showing the continued practice of excluding the value of investments in human resources from the balance sheet, this research hypothesises that accountants in Nigeria would agree that there are specific reasons for excluding the value of an investment in human resources from the balance sheet. Thus, hypothesis three is stated below in the null form.

(3) **H_0 -** There is no significant difference among accountants regarding the reasons for excluding investment in human resources from the statement of financial position.

2.7.4 Hypothesis four

Many prior studies have identified diverse problems and challenges in HR accounting. Although the studies put forward many factors as the main problem of HR accounting, many have reported the lack of a valuation model for human resources as the main problem.

Examples of studies that highlight the problems and challenges of HR accounting include

Bonsu et al. (2019), Okeke (2016), Arkan (2016), Oluwatoyin (2014), and Sharma and Lama (2014). Prior studies have indicated that the absence of a generally accepted HR valuation model is a significant challenge in HR accounting. The position of the prior studies indicating lack of valuation model as the main problem of HR accounting is in line with the postulation of the money measurement concept that no transaction will be recorded in accounting books without being measured in monetary terms.

In agreement with the results and suggestions of previous research, this research hypothesises that accountants in Nigeria would agree that the lack of an acceptable model for valuing human assets is the major challenge of HR accounting in Nigeria. Thus, hypothesis four is stated below in the null form.

(4) **H_0 -** There is no significant difference among accountants on whether the lack of a generally accepted valuation model for human resources is the major challenge of HR accounting in Nigeria.

2.8 Summary of the Chapter

The literature shows that HR accounting has recorded some breakthroughs in developing measurement and valuation models. Although researchers have developed various models for HR valuation, all are affected by some limitations, like a failure to comply with the methods of valuing assets recommended by the IASB, and none of the models has been accepted generally across the globe (Sirisetti & Mallesu, 2012; Okpala & Chidi, 2010). This and other factors like a low level of awareness about HR accounting led to the low adoption of HR accounting in Nigeria compared with other developing countries with higher adoption levels. Furthermore, the literature also indicates a shortage of empirical investigations on HR accounting in Nigeria (Al Hanini, 2018; Oladele et al., 2018).

There are many challenges in HR accounting. Among the challenges are the lack of an acceptable valuation model and a lack of accounting standards to guide accounting and reporting using HR accounting methods. Finding solutions to these problems will enhance the adoption and implementation of HR accounting. Adopting HR accounting will help in providing additional information on companies and satisfy some of the informational needs of stakeholders.

Chapter 3: Research Methods and Data Collection

3.1 Introduction

The literature shows that HR accounting has recorded some breakthroughs in developing measurement and valuation models. Although researchers have developed various models for HR valuation, all are affected by some limitations, like a failure to comply with the methods of valuing assets recommended by the IASB, and none of the models has been accepted generally across the globe (Sirisetti & Mallesu, 2012; Okpala & Chidi, 2010). This and other factors like a low level of awareness about HR accounting led to the low adoption of HR accounting in Nigeria compared with other developing countries with higher adoption levels. Furthermore, the literature also indicates a shortage of empirical investigations on HR accounting in Nigeria (Al Hanini, 2018; Oladele et al., 2018).

There are many challenges in HR accounting. Among the challenges is the lack of an acceptable valuation model and a lack of accounting standards to guide accounting and reporting using HR accounting methods. Finding solutions to these problems will enhance the adoption and implementation of HR accounting. Adopting HR accounting will help provide additional information on companies and satisfy some of the stakeholders' informational needs.

3.2 Research Approach and Design

Research is a systematic investigation undertaken to find an answer to a research problem. It is the process of finding reliable answers or solutions to problems by following specific and definitive steps. The research follows a logical sequence and is not based on beliefs (Saunders et al., 2019; Bhatti & Sundram, 2015). For his part, Smith (2003) posits that research in accounting has to do with finding solutions to problems, investigating relationships, and developing knowledge. This logical sequence makes scientific research replicable. The replicability of research adds to its validity and reliability. A researcher must thus be able to precisely demonstrate the procedures and methodologies used to conduct his research. These methods, processes, and orders are all embedded in the research approach, design, and method. Kumar (2011) describes the use of appropriate methods as an "extremely important feature of research."

A research approach is an overall procedure for conducting research. Creswell (2014) describes a research approach as the plans and procedures for conducting research. It comprises philosophical assumptions, data collection methods and analysis, and interpretation. A research approach is essential because it is an effective strategy that increases the validity of the research (Creswell, 2014).

Research designs are the choices that give a specific direction to a study. Research design helps explain how a researcher intends to address a research question. It is a master plan about how a researcher intends to address the research problems (Saunders et al., 2019). Kumar (2011) argues that the choice of relevant research design in a study is a significant determinant of the validity, comparability, and generalisability of the findings. Therefore, adopting an inappropriate research design can lead to misleading findings and waste human and financial resources (Kumar, 2011).

Creswell (2014) and Saunders et al. (2016) described three research designs. These are "quantitative, qualitative and mixed methods" designs (Saunders et al., 2016, p. 165). Kumar (2011) identified only two types: quantitative and qualitative. On the other hand, Saunders et al. (2019) brought out six research designs, as shown in Figure 10. This study adopts the multimethod quantitative research design as explained under methodological choice in 3.2.3. Multimethod quantitative research uses primary and secondary data (Saunders et al., 2019).

3.2.1 Research process

A research process comprises a series of interrelated events, the necessary steps to perform research successfully, and the appropriate sequence of these events (Kothari, 2004). The research approach and the research design are parts of the scientific research process. The scientific research process is a comprehensive and sequential step involving rigorous data collection and analysis.

Authors disagree on the nature, components, and nomenclature of the research process. For instance, Smith (2003) provides a research sequence model with seven steps. The Smith (2003) sequence of the research process starts with the identification of a board area, followed by the selection of a topic, a decision on approach, formulation of a plan, collecting information, data analysis, and, lastly, presentation of findings. Figure 9 shows this research sequence.

Figure 9: The Research Sequence (Adopted from Smith (2003)

Okeke et al. (2008) posit that the research process consists of six steps, which are: problem definition; determination of sources of data and research design; designing the method and forms of collection of data; sample selection; data analysis and interpretation; and lastly, writing the research report. A more detailed and all-encompassing research process model is given by Saunders et al. (2019). The authors refer to this research process model as the "research onion." Based on the research onion, the research process consists of six layers. These layers are the selection of research philosophy, the section on the approach to theory development, the section on methodology, the identification of research strategy, time horizon, and then choosing technique and procedure. Figure 10 below shows the "research onion".

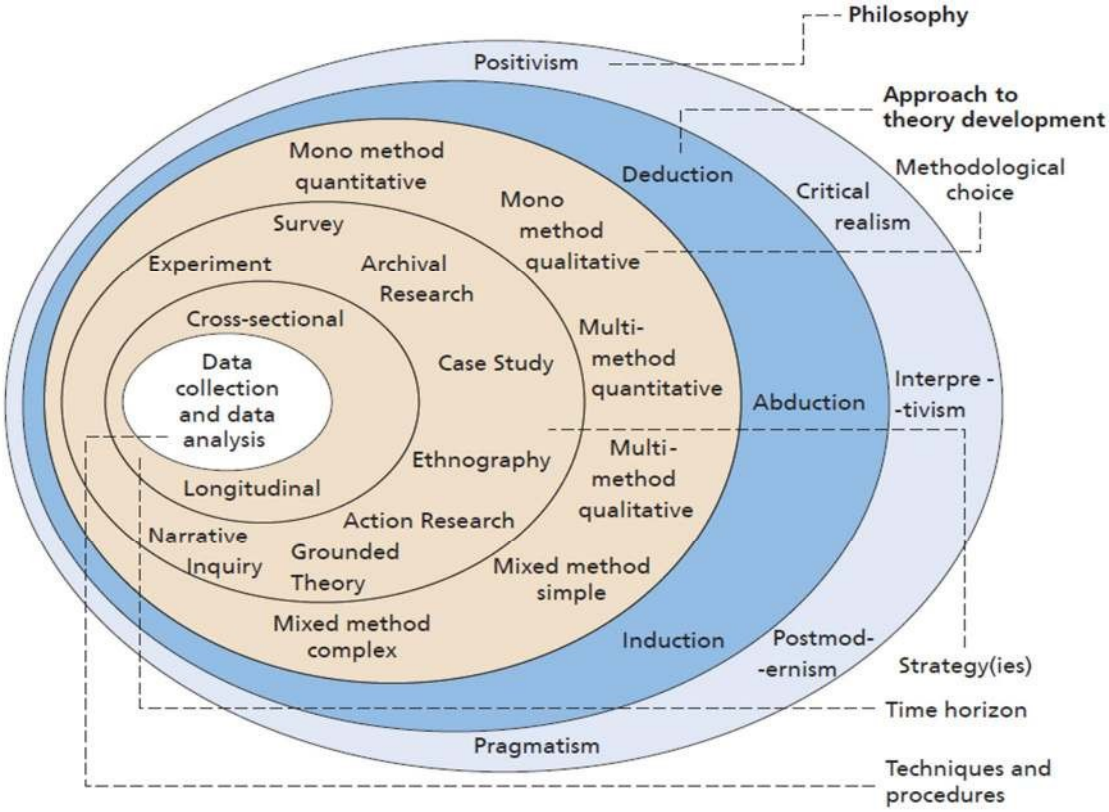

Figure 10: "The Research Onion" (Saunders et al., 2019)

This study adopts the Saunders et al. (2019) model because, as stated above, it is more detailed and touches on all the various aspects of the research process. The research onion contains a summary of the critical points that a researcher should consider before conducting research. In this research, the layers of the onion provide the basis for considering the philosophical orientation, research approach, research strategies, research plan timelines, and the data collection methodologies adopted in the research.

3.2.2 Research philosophy

The philosophy of a research is a collection of principles and assumptions about the creation of new knowledge. Developing knowledge is the hallmark of research. Researchers make assumptions about many aspects of their research. Researchers make assumptions about reality and human knowledge (Saunders et al., 2019). Although philosophical ideas are largely hidden in research, there is a need to identify the philosophical ideas of research because the ideas influence research practice. It is due to this fact that Creswell (2014) recommends that the philosophical idea of a researcher should be made part of the research proposal so that the philosophical orientation of the research will be known. There are different philosophical orientations when it comes to the conduct of research. Some of these are positivism, inductivism, interpretivism, realism, pragmatism, and postmodernism (Saunders et al., 2019; Creswell, 2014).

The philosophical orientation behind this research is positivism. Bhatti and Sundram (2015) maintain that positivism in the field of management aims to generate laws that govern the operation of organisations. Smith (2003) argues that positivism is the most established research philosophy in accounting research. The positivist approach starts with problem definition or identification, then literature review, hypothesis development, and lastly, method and results (Smith, 2003). The sequence of events in the positivist approach is shown in Figure 11, as Smith (2003) illustrated.

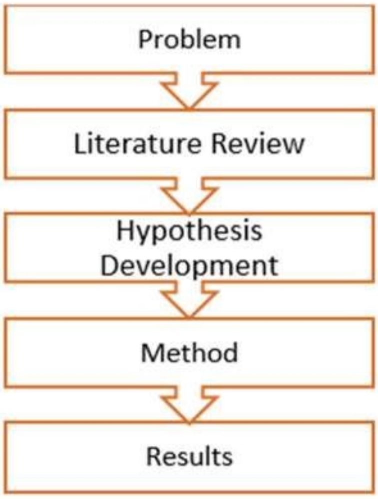

Figure 11: The Positivist approach. Adapted from Smith (2003)

3.2.3 Research approach to theory development

According to Bhatti and Sundram (2015), inductive and deductive reasoning are the two types of reasoning in research. Saunders et al. (2019), on the other hand, identified three types of reasoning in research: inductive, deductive, and abduction. These types of reasoning are what Saunders et al. (2019) refer to as the approaches to theory development in research.

Using deductive reasoning, a researcher develops theoretical propositions and later tests them to get empirical evidence. Conversely, a researcher will be using inductive reasoning where the research process starts with data collection through observation, followed by an analysis of patterns, formulation of relationships, and lastly, theory development (Bhatti & Sundram, 2015). The theory forms the basis for the empirical testing of results in a deductive method (Smith, 2003).

This research adopts the deductive approach. The deductive process is not new to accounting research. Smith (2003) maintains that the deductive approach "is the most common form of positivist accounting research" (p. 24). Bhatti and Sundram (2015) construct a simple model for deductive reasoning in research. The model has four levels, starting with theory development, which is followed by formulating a hypothesis, collecting, and analysing data, and then accepting or rejecting the hypothesis. This model is consistent with the one developed by Smith (2003). The Smith (2003) model of a deductive process consists of four major processes. According to this model, the deduction process starts with a theory, followed by the operationalisation of concepts, which is followed by testing the theory through observation. Based on the observation, a researcher then either discards the theory if it fails the test or accepts the theory if it passes the test and predicts future observations.

Figure 12 below depicts the deductive approach model adopted in this research.

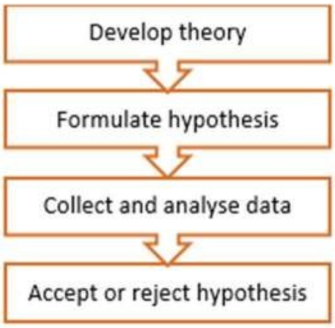

Figure 12: Deductive reasoning (Adopted from Bhatti and Sundram, 2015)

3.2.4 Methodological choice

Saunders et al. (2019) refer to methodological choices "as the use of a quantitative, qualitative and mixed methods research design" (p. 165). Therefore, methodological choices have to do with the research design being quantitative, qualitative, or mixed (Creswell, 2004). Quantitative refers to matters that can be measured. Therefore, quantitative research involves the use of measurement of variables and testing and analysing the variables empirically using statistical tools (Bhatti & Sundram, 2015; Okeke et al., 2008). According to Kothari (2004), quantitative research is applicable only when the phenomena or variables to be studied can be numerically expressed. In most cases, the sample size for this type of research is large (Stockemer, 2019; Bhatti & Sundram, 2015).

On the other hand, qualitative research is a methodology involving an unstructured and indepth investigation of a limited sample (Bhatti & Sundram, 2015; Okeke et al., 2008). Qualitative research is an exploratory investigation of a small sample size. This type of research involves a qualitative phenomenon. That is, it involves parameters that have to do with quality. This research method is targeted at uncovering the underlying factors like the real motives and feelings of the research participants by using in-depth interviews. Researchers use methods like story and sentence completion tests and word association tests in such studies. Qualitative research also includes studies to determine respondents' behaviour or opinions on how they feel or their perception of a specific subject or organisation (Kothari, 2004). Table 3.1 shows the differences between qualitative and quantitative analysis.

A mixed research method is essentially a mixture of the two approaches; that is, a blend of both quantitative and qualitative approaches. This combination can be of varying proportions. Therefore, each combination takes the merits and demerits of the two methods combined in the proportion of the combination.

Kumar (2011) is of the view that there are more research designs in the quantitative approach than in the qualitative approach. Kumar (2011) further asserts that the designs in the quantitative approach are “specific, well structured have been tested for their validity and reliability, and can be explicitly defined and recognised” (p. 103). Quantitative research is a major tool for confirming empirical relationships (Stockemer, 2019). Furthermore, Arkan (2016) advocates for more empirical research to be conducted by researchers on the processes, challenges, and prospects of HR accounting.

This research adopts the multi-method quantitative research method due to its advantages and the nature of this investigation. Multi-method quantitative research employs the use of more than one technique for the collection of quantitative data and analysis (Saunders et al.).

As pointed out in 3.2.2, this research adopts the deductive reasoning approach to theory development, and Stockemer (2019) emphasises that “the quantitative research process is deductive” (p. 18). Stockemer (2019) further emphasises that quantitative research is driven by theory. Therefore, the deductive approach starts and ends with a theory. Generally, quantitative research is associated with positivism and a deductive approach (Saunders, 2019).

3.2.5 Research strategy

The plan a researcher pursues to find solutions to research questions is called the research strategy. It serves as a bridge between the philosophy of research and the choice of methods of data collection and analysis (Saunders, 2019). As indicated in 3.2.3, this research is based on a quantitative design. The quantitative research method is primarily related to strategies like experiments and surveys. (Saunders, 2019). Experimental research is mostly associated with the natural sciences and medicine. In most cases, researchers conduct the experiments in laboratories in a controlled environment. In such instances, precision and accuracy are very important.

Another research strategy associated with quantitative research is survey research. A survey is widely used in research in the social and management sciences (Saunders et al., 2019; Bhatti & Sundram, 2015). It is a strategy used for a deductive research approach. Survey strategies are mostly employed to answer questions like where, who, how many, and how much. The survey strategy uses a questionnaire, an interview, and other structured means of data collection and is popular and economical (Saunders et al. 2019). According to Creswell (2004), survey research offers a detailed overview of the population's behaviour or viewpoint as reflected by a sampling of events. This research is a survey that uses a questionnaire to collect primary data and structured analysis to extract data from the audited accounts of the pre-selected reporting entities.

Table 1: Distinctions between qualitative and quantitative research

Criteria	Qualitative Research	Quantitative Research
Purpose	To understand and interpret social interactions.	To test hypotheses, look at cause and effect, and make predictions.
Group Studied	Smaller and not randomly selected	Larger and randomly selected.
Variables	Study of the whole, not variables.	Specific variables studied
Type of Data Collected	Words, images, or objects	Numbers and statistics.
Form of Data Collected	Qualitative data such as open-ended responses, interviews, participant observations, field notes, and reflections.	Quantitative data based on precise measurements using structured and validated data-collection instruments.
Type of Data Analysis	Identify patterns, features, themes.	Identify statistical relationships.
Objectivity and Subjectivity	Subjectivity is expected.	Objectivity is critical
Role of Researcher	Researcher and their biases may be known to participants in the study, and participant characteristics may be known to the researcher.	Researcher and their biases are not known to participants in the study, and participant characteristics are deliberately hidden from the researcher (double blind studies).
Results	Particular or specialized findings that is less generalizable.	Generalizable findings that can be applied to other populations.
Scientific Method	Exploratory or bottom-up: the researcher generates a new hypothesis and theory from the data collected	Confirmatory or top-down: the researcher tests the hypothesis and theory with the data.
View **of Human Behavior**	Dynamic, situational, social, and personal	Regular and predictable.
Most Common Research Objectives	Explore, discover, and construct.	Describe, explain, and predict.
Focus	Wide-angle lens; examines the breadth and depth of phenomena	Narrow-angle lens; tests a specific hypotheses.
Nature of Observation	Study behavior in a natural environment.	Study behavior under controlled conditions; isolate causal effects
Nature of Reality	Multiple realities; subjective.	Single reality; objective.
Final Report	Narrative report with contextual description and direct quotations from one research participants.	Statistical report with correlations, comparisons of means, and statistical significance of findings.

Adapted from Xavier University Library (2012)

3.2.6 Research time horizon

The research time horizon has to do with the number of times observations are made. That is the frequency of making the observations. In survey research, a researcher may choose to observe events or phenomena at one point only or at more than one point in time. Where a researcher chooses to make an observation (collect data) at one point in time, the research is referred to as a cross-sectional study in terms of time horizon. Conversely, where a researcher opts to collect data at multiple points in time, the study becomes longitudinal.

This study is cross-sectional. The respondents from whom the primary data was sourced were contacted once while the secondary data was extracted from the audited accounts for the year 2019 of the sampled reporting entities.

3.3 Population of the Study

The term "population" refers to the whole collection of individuals, objects, or events that have common features and are observable (Bhatti & Sundram, 2015; Okeke et al., 2008). Kothari (2004) refers to the population of a study as the totality of items, organisations, individuals, or groups to be studied; they make up the population of the study. This is also referred to as the universe (Kothari, 2004). Okeke et al. (2008) see the population as the group of persons or items to be studied. Okeke et al. (2008) argue that determining the population of a study is a very important aspect of every study. Okeke et al. (2008) described determining the population of a study as "the first and foremost" thing to do (p.116). Okeke et al. (2008) further emphasised that the population of a study needs not to be made up of living individuals alone, as it can be a group of things other than living individuals.

The population of a study can be finite or infinite (Okeke et al., 2008). A finite population is a population of a study that has a defined and known number of elements. The totality of the elements of a finite population is known with a significant level of certainty. On the other hand, when the total number of the population of a study is not known, such a population is termed an infinite population (Kothari, 2004).

The target population of research refers to the group of people to whom a survey applies. A target population is the group of individuals about whom a researcher can draw a conclusion and make inferences (Bhatti & Sundram, 2015; Kumar, 2011). Therefore, a target population is a population on which a researcher intends to make a generalisation based on the results of a study.

As stated in 3.2.4, this study employs the multi-method approach to data collection, which involves collecting different types of data (primary as well as secondary). This method employs the use of two or more quantitative data collection techniques for the collection of the two types of data for analysis (Creswell & Creswell, 2018; Saunders et al., 2016). This study's population, from which primary data were collected, consists of 85 professional accountants who are members of ANAN and ICAN and are registered with the Bauchi state branch and district society of the two professional accounting bodies. The use of professional accountants as the population in a study is not new in accounting research. Professional accountants produce financial reports, audit the reports, and provide investment and financial advice to their clients or employers. Studies that made use of the population of professional accountants by Bonsu et al. (2019) and Tasios and Bekiaris (2012).

The population of the study from whom secondary data is collected comprises the 112 listed non-financial companies on the NSE. Companies classified under the financial sector are excluded from the study because of their peculiarities in terms of financial reporting and regulations. This agrees with some prior studies, including Al-Dmour et al. (2018), MartínezFerrero (2014), and Rafique (2012).

3.3.1 Sample and sampling techniques

According to Okeke et al. (2008), a sample is an appropriate representative of a population to be studied. As stated above, this study adopts multi-method quantitative research. Since the study involves the use of secondary as well as primary data, the samples for the collection of data are classified into two, as discussed in the subsequent paragraphs.

3.3.2 Sampling and secondary data collection

As indicated in 3.3 above, the population of this study from whom secondary data was collected is the number of listed non-financial companies on the NSE. The number stands at 112 nonfinancial companies as of May 15th, 2020 (NSE, 2020). The sample size of the study is determined using Yamane's formula (Yamane, 1973) for calculating the sample size of a finite population as applied in Dika et al. (2018). This formula is simple to use and has been used in many studies; the result it gives is based on the exact number of the population (Okeke et al., 2008).

Below is Yamane's formula for the determination of the sample size of a finite population.

$$n = \frac{N}{[1+N(e^2)]}$$

Where:

n = Sample size.

N = Number of population. The population of the study is 112 listed non-financial companies.

e - The margin of error. The margin of error adopted in this study is 5% (0.05).

The NSE has ten (10) non-financial segments.

Table 2: Stratification of Sampling Size

S/N	Strata	Population	Sample Size
1	Agriculture	5	4
2	Conglomerates	5	4
3	Construction/Real Estate	9	7
4	Consumer Goods	20	15
5	Healthcare	10	8
6	ICT	9	7
7	Industrial Goods	13	10
8	Natural Resources	4	3
9	Oil and Gas	12	9
10	Services	25	19
	Total	**112**	**86**

Source: Researcher's construct (2020)

The sample size of each stratum is determined by dividing the population of the stratum by the total sample size of 112 and multiplying it by the sample size of 86. The results are rounded to the nearest whole number. The sample size determination is simplified by applying this formula:

The sample size of a stratum = ______________ x h

The sample size of 86 companies is subjected to power analysis using G-power software. Statistical power analysis is the probability that results in rightly failing to accept a null hypothesis. Statistical power is the probability of a test accurately failing to accept a false null hypothesis (Cohen, 1988). The essence of computing the statistical power is to indicate the confidence one may have in a conclusion drawn using the results of research. Power analysis also allows for the detection of sample size needed to allow for the detection of effects if there are any. Power analysis helps in estimating the minimum sample size required for research, provided that the level of significance, effect size, and statistical power have been estimated.

A power analysis was conducted to determine the possibility of a sample size of 86 to detect an effect on the population. The result shows that the sample size has a power of 0.88, which is well within the 0.81 to 0.90 recommended (Cohen, 1988).

The financial reports for the year 2019 of the selected firms are the sources of the secondary data utilised in this research. The financial reports are retrieved from the database of the NSE. The data from the audited accounts of the pre-selected reporting entities are analysed to construct the two variables of the study. The variables are the HR accounting disclosure index (HRADI) and the financial-reporting quality index (FRQI) of each of the sampled companies. Section 3.5.2 provides explanations in detail.

3.3.3 Sampling and collection of primary data

As indicated under the methodological choice in 3.2.4, this study adopts multi-method quantitative research, which employs two or more quantitative techniques for data collection and analysis (Saunders et al., 2019). Besides the data generated from the audited accounts of the pre-selected reporting entities as explained in 3.3.2 above, this study employed the use of primary data sourced from professional accountants using a structured questionnaire. The population of professional accountants comprising members of ANAN and ICAN in Bauchi State is eighty-five (85). The population is based on the available records of members at the Bauchi State offices of the two professional bodies. Applying Yamane's formula shown in 3.3.2 above, the sample size of the population of professional accountants for this study is seventy (70). The sample size of 70 was subjected to power analysis. Based on the effect size of 0.45 for the three groups of accountants and a sample size of 70, the power stands at 0.84, which is within the acceptable level expected.

The study utilised an online questionnaire for data collection from a sample of professional accountants to determine the challenges and problems associated with HR accounting in Nigeria. The online questionnaire is a 5-point Likert scale tool.

3.4 Materials/Instrumentation of Research Tools

The conceptual framework of this research is based on certain variables. Data relating to these variables were collected using two instruments. One of the instruments was used to collect secondary data relating to the primary construct of the research: HR accounting disclosure and FR quality. The other instrument was used for gathering primary data about the variables relating to the challenges of HR accounting.

A research instrument is a means of data collection in research. It is designed to evaluate information, attitudes, knowledge, and perception. The research instrument is also referred to as a measuring instrument (Kothari, 2004). A questionnaire is an instrument used for data collection in this research. According to Newing (2011), a questionnaire comprises a series of well-articulated short questions asked. Saunders et al. (2019) indicate that many previous studies utilised questionnaires as the research instrument for the collection of primary data. Kothari (2004) holds a similar view and describes the questionnaire as “quite popular”, especially in studies involving large-scale investigations (p. 100). Kothari (2004) further asserts that the use of a questionnaire for data collection is being accepted by investigators, researchers, private and public organisations, and governments.

This research employs the use of a questionnaire. A structured online questionnaire was used to collect primary data from the respondents to determine the challenges and problems associated with HR accounting in Nigeria. The use of an online questionnaire is necessitated by the lockdown imposed by governments in Nigeria due to the coronavirus pandemic (COVID-19) and the need to maintain the principle of physical distancing. Responses from the respondents are stratified and analysed based on the sector of employment of the respondents, namely, accounting theoreticians (academics), accountants in the public sector (government employment), accountants in private organisations, and accountants in public practice (auditors, consultants, financial advisers, etc.). The reason for the stratification of the responses is to allow the researcher to identify the differences in the three groups of professionals across their employment divide.

The questionnaire for this survey was designed based on the 5-point Likert scale. A Likert scale questionnaire is widely used in designing questionnaires that measure the responses in survey research where the strengths of opinion are important. It is generally used to measure the perceptions, opinions, feelings, and emotions of respondents. The scale is particularly useful where the strength of opinions or feelings of the research participants are required (Saunders et al., 2019; Kothari, 2004). The target of the questionnaire was to capture the responses of the participants regarding the problems and challenges of HR accounting, including the reasons for the exclusion of HR value from being disclosed on the balance sheet.

The questions used in the questionnaire for this research have been adapted from Bonsu et al. (2019) and Onyekwelu et al. (2015). Saunders et al. (2016) maintain that in building a questionnaire, a researcher can either "adopt questions used in other questionnaires; adapt questions used in other questionnaires;" or "develop their own questions" (p. 452). In the same vein, the European Association of Methodology (EAM) (2008) maintains that researchers may "want to adopt existing questions (i.e., replicate), adapt existing questions (i.e., modify) or, alternatively, develop new questions for their study" (p. 64).

Some authors believe that researchers often choose to either adopt or adopt a questionnaire of questions for their studies. For instance, Sousa et al. (2016) hold that developing an entirely new questionnaire calls for rigorous testing and validation to ensure reliability and validity. Sousa et al. (2016) further argue that validating a new questionnaire has cost and time implications, and "researchers often adapt existing questionnaires to better fit the purpose of their study" (p. 1). Smith (2003) asserts that accounting researchers usually adopt or adapt questionnaires in their studies. Smith (2003) argues that accounting researchers "have few instruments of their own (with many of these originating in or adapted from the organizational behavior literature)" (p. 1).

Apart from overcoming the "time and cost constraints" as observed by Sousa et al. (2016), adapting a questionnaire has other advantages (p. 1). Sousa et al. (2016) discovered that respondents understand questions adapted better than the original questions because the adapted questions "were easier to understand" (p. 1). Additionally, Sousa et al. (2016) found that the respondents behave differently towards the two questionnaires (original and adapted).

It is because of the merits of adapting questions for a questionnaire that this research adapted questions from Bonsu et al. (2019) and Onyekwelu et al. (2015). The adaptations made to the questions in the two questionnaires mostly focused on classifying the questions into more appropriate headings, modifying the grammatical structures, and expanding the questions. An observation of the questionnaire in Onyekwelu et al. (2015) shows that the questions are not categorised, while the questions in the questionnaire by Bonsu et al. (2019) are categorised into two: "exclusion reasons" and "challenges of HRA" (p. 10 & 11).

The adaptations to the two sets of questions involve re-grouping, re-phrasing, restructuring, and expansion of the questions. For example, the adaptation made to question 7 in the questionnaire used by Onyekwelu et al. (2015); question 7 in the questionnaire used by Onyekwelu et al. (2015) asks about the appropriateness of making HR accounting a necessary element of FR. The question has been disintegrated into three new questions (questions 6, 7 and 8), with each question concentrating on the alternative way of reporting HR accounting information. Appendix 3 gives more details about the adaptations made to the two sets of questions by Bonsu et al. (2019) and Onyekwelu et al. (2015).

In summary, the questions in the part of the questionnaire about the nature and presentation of

HR accounting information have been adapted from Onyekwelu et al. (2015). The questions about the reasons for not reporting the value of investments in HR as an asset and the challenges of HR accounting have been adapted from Bonsu et al. (2019) except question 21, which has been adopted from Onyekwelu et al. (2015). Appendix 3 contains the details of the adaptation made to the questions.

The questionnaire used in this study is sectionalised into four parts. The first part consists of information about the research and informed consent, where the participants were asked to show they understood what the study was all about and indicate their consent to participate by ticking the box provided. The second part of the questionnaire is for collecting basic data about the respondents. This includes the professional affiliation, area of full-time employment, year of service, and gender.

The other three parts of the questionnaire consist of the major parts. The first part captured data relating to the nature and characteristics of HR accounting. This part has eight items. The second part also has eight items aimed at gathering data on the reasons behind the exclusion of HR values from the balance sheet, while the third part of the questionnaire collects data from the participants' on the major challenges of HR accounting in Nigeria. The section has eight items.

3.5 Operational Definition of Variables

One of the common methods used in collecting and analysing secondary data is document analysis (Creswell, 2014; Okeke et al., 2008; Kothari, 2004). This study uses document analysis to capture data from the annual reports of the selected firms. The analysis involves the identification of voluntary HR accounting disclosure items in the reports and assessing FR quality using the qualitative characteristics of FR. The variables for this research are identified in this section.

3.5.1 Independent variable: HR accounting disclosure

HR accounting disclosure refers to voluntary disclosure in the published annual financial statement. The determination of the level of voluntary HR accounting disclosure is done based on the computation of the HR accounting disclosure index (HRADI) for each of the sampled companies. Using the HR accounting disclosure index to determine the degree of HR accounting agrees with the work of Syed (2009) and has been used in many studies such as Pham et al. (2021), Ali et al. (2020), Bhattacharjee et al. (2017), Akintoye and Ifayemi (2016), Babajide (2013), and Micah et al. (2012). This study adopts (without modifications) the fifteen voluntary disclosure items used by Micah et al. (2012) for the determination of the HR accounting disclosure index. The list of the disclosure items is in Table 3.

Table 3 HR Accounting Disclosure Items

S/N	Disclosure Items
1	Separate Human Resource Accounting Statement
2	Total Value of human resources
3	Number of employees
4	Human resource policy
5	Training and development
6	Management succession plan
7	Employment report
8	Employees' value creation
9	Human resource development fund
10	Employees/workers fund
11	Employees categories
12	Managerial remuneration
13	Retirement benefits
14	Performance recognition
15	Pension fund

Source: Adopted from Micah et al. (2012)

To determine the HR accounting disclosure score of each of the sampled companies, the financial report of the company was scrutinised to identify each of the fifteen disclosure items listed in table 3.4 above. A score of one (1) is recorded for any of the disclosure items found in the report, while a score of zero (0) is recorded for any of the items not disclosed in the report.

Thus, a company can score from zero to fifteen points. To determine the disclosure index of each company, the total score obtained by the company is divided by the total score obtainable and multiplied by 100 to convert the result into a percentage. As such, the HR accounting disclosure index score of each of the sampled companies ranges from 0 to 100. Therefore, the HR accounting disclosure index of each of the companies is determined as shown in the formula below.

HRADI = ____________________ x100

3.5.2 Dependent variable: Financial-reporting Quality

FR quality, the dependent variable, has been measured in different ways by many researchers (Alawaqleh and Almasri, 2021; Odunayo & Festus, 2020; Mahboub, 2017). There are no universal methods of measuring FR quality in the literature, as argued by Martínez-Ferrero (2014). Some of the measurements of FR quality used in prior studies include the degree of accrual quality; degree of accounting conservatism; value relevance model; specific elements in the financial report; and the operationalisation of qualitative characteristics of the financial statement (Kythreotis, 2014; Martínez-Ferrero, 2014; Tasios & Bekiaris, 2012; Beest et al., 2009).

Except for the operationalisation of qualitative characteristics of the financial statement method, all the other methods of measuring FR quality have apparent deficiencies, as Mahboub (2017) and Beest et al. (2009) observed . The other methods concentrate on measuring FR quality on the basis of the information available in the balance sheet and income statements. Furthermore, the other methods do not consider non-financial information in measuring FR quality. Therefore, this study adopts a method of operationalising the qualitative characteristics of FR because it considers both financial and non-financial information in assessing FR quality (Mahboub, 2017; Beest et al., 2009). Additionally, the method uses the qualitative features of

FR as adopted by the IASB (2018).

This study adopts the FR quality indices based on the operationalisation of the qualitative features of a good FR developed by Beest et al. (2009). This method was used in studies like Kaawaase et al. (2021), Kythreotis and Constantinou (2020), Seiyaibo and Okoye (2020), Mahboub (2017), and Mbobo and Ekpo (2016), although some with modifications. This method is considered more appropriate for this study because it is capable of measuring both the financial and non-financial dimensions of the information needed for decision-making. The method considers all the dimensions of decision usefulness of the financial reports as interpreted in the conceptual framework for the financial report. Specifically, the study adopts the methods of constructing FR quality indices used by Mahboub (2017), which are based on Beest et al. (2009) with some modifications.

In line with Beest et al. (2009), FR quality was operationalised by 21 proxies based on five constructs derived from the qualitative characteristics of FR. Table 4 contains a summary of these constructs.

Table 4: Summary of Constructs and Items for Measuring FR Quality

S/N	Construct	Abbreviation	Number of items	Assessment
1	Relevance	Relev	4	5-Pont Likert scale
2	Faithful representation	Faith	5	5-Pont Likert scale
3	Understandability	Unds	5	5-Pont Likert scale
4	Comparability	Comp	6	5-Pont Likert scale
5	Timeliness	Time	1	5-Pont Likert scale

Source: Adopted from Beest et al. (2009)

According to IASB (2018), there are some elements of FR quality that are accepted. These elements are further divided into “fundamental and enhancing” qualitative characteristics of

FR (Kythreotis & Constantinou, 2020, p. 4). The fundamental characteristics of FR are "relevance and faithful representation," while the enhancing qualities are "comparability, verifiability, timeliness and understandability" (Albawwat et al., 2021, p. 797; Koppeschaar et al., 2019, p. 10; IASB, 2018, p. 6; Elliot & Elliot, 2017, p. 161). The four enhancing characteristics improve the usefulness of financial information but do not transform non-useful information into a useful one even though each of the characteristics is important (Albawwat et al., 2021; Koppeschaar et al., 2019; IASB, 2018; Herath & Albarqi, 2017). Summarising the main distinction between the two categories of the qualitative features of FR, Kythreotis and Constantinou (2020) explain that "the enhancing characteristics cannot single-handedly generate useful information" (p. 4). The qualitative features are discussed in the subsequent paragraphs.

The first of the characteristics of financial reporting is relevance (Koppeschaar et al., 2019; IASB, 2018). According to Koppeschaar et al., (2019), Elliot and Elliot (2017), and Herath and Albarqi (2017), relevance is associated with the concepts of materiality and usefulness of the information. Relevance makes information useful (Koppeschaar et al., 2019; IASB, 2018). When information influences the decision of a user, the information is said to be relevant (Koppeschaar et al., 2019; IASB, 2018; Elliot & Elliot, 2017). The predictive and confirmatory values of financial information make a difference in decisions (IASB, 2018; Herath & Albarqi, 2017). The relevance of financial information is heavily dependent on the ability of the information to provide forward-looking, non-financial information (IASB, 2018; Elliot & Elliot, 2017). Such information should include both fair value and feedback to users of information as to how significant occurrences affect the organisation (Mbobo & Ekpo, 2016).

This research measured relevance using four proxies: the presence of forward-looking statements in the FR; the presence of non-financial information in the reports; the use of fair value; and the provision of user feedback on the FR. The study assesses each of the constructs with a five-point Likert scale (Beest et al. 2009).

According to Koppeschaar et al. (2019), IASB (2018) and Elliot and Elliot (2017), the second fundamental characteristic of FR is the "faithful representation of financial information" (Aliu, 2019, p. 31). For information to be presented faithfully, the information should represent the substance it claims to represent adequately (Koppeschaar et al., 2019; IASB, 2018). A faithfully represented information should be complete, unbiased, and free from material misstatements and errors (Elliot & Elliot, 2017; IASB, 2018). It should be noted, however, that faithful representation can be affected by uncertainties in measurements (IASB, 2018).

According to Mbobo and Ekpo (2016), the proxies commonly used for faithful representation are the absence of bias, neutrality, audit report, and governance. This research used five proxies of faithful representation as demonstrated by Beest et al. (2009). The proxies are the absence of bias through the provision of valid arguments; choice of accounting policies based on valid arguments; the inclusion of both positive and negative events in the report; the type of audit report; and corporate governance. This research assessed each of these constructs using a fivepoint Likert scale.

One of the enhancing qualitative characteristics of FR is its understandability. (IASB, 2018). Understandability is attained by efficiently communicating events and facts to the users of information (Koppeschaar et al., 2019). It is the user that determines whether the information is understandable or not. As such, the better the user understands the information, the higher the level of understandability (Herath & Albarqi, 2017). Careful presentation and classification of information in the financial report can enhance understandability. For example, using graphics, graphs, charts, tables, and clear presentation can aid in following and understanding technical terms and jargon.

According to Mbobo and Ekpo (2016), researchers can measure understandability using five proxies, namely: organisation of information in the report; information disclosure in notes to the accounts; usage of tables and graphs; absence of technical jargon; and presence of a glossary of unfamiliar words. This research also adopts these five proxies to measure understandability as a qualitative feature of financial reporting. As such, how well-organised the presentation was in the financial reports of sampled firms was assessed. The presence of notes to the accounts, graphs and tables, usage of technical jargon and glossary were also assessed using a five-point Likert scale.

Comparability is another enhancing qualitative feature of useful financial information. It is a characteristic that allows users of the information to compare and contrast financial and economic information provided in financial reporting (Mbobo & Ekpo, 2016). This allows users of the information to compare financial reports, cash flows, performance, and the financial position of a firm. Users can make such a comparison among the reports provided by the firm over time or with reports from other firms (Herath & Albarqi, 2017). To enhance the comparability of information in the financial report, a company should be consistent in its application of accounting policies and disclose any changes in the policies together with the implications of those changes. Besides, the use of financial ratios can enhance comparability (Elliott & Elliott, 2017; Herath & Albarqi, 2017).

The proxies for measuring comparability as an enhancing feature of financial information, as suggested by Mbobo and Ekpo (2016) and Beest et al. (2009), consist of the following: explanation of alterations in accounting policies; explanation of revisions in accounting estimates and judgements; the extent of adjustment to previous year’s figures to reflect the implication of alterations in accounting policies and revisions in estimates; and the presence of indexes and ratios in the report. This research used these proxies to assess the comparability of each of the financial reports of the sampled companies using a five-point Likert scale.

Timeliness is the last enhancing qualitative feature of financial information, according to Mbobo and Ekpo (2016) and Beest et al. (2009). Timeliness means the provision of information to decision-makers in good time before the information loses its capacity to influence the decision (Mbobo & Ekpo, 2016). Koppeschaar et al. (2019) argue that "information will be able to influence the decisions of users when it is reported timely. Usually, older information is less useful..." (p. 10). Despite this argument, certain information may be useful over time, as inferred by Koppeschaar et al. (2019) when they postulate that "some information could still be useful over a longer period of time when it is used for purposes of identifying and assessing certain trends" (p. 10).

In accounting, "timeliness has no specific implications for measurement" (Koppeschaar et al., 2019, p. 20). But in accounting research, particularly in assessing FR quality, timeliness is measured (Alawaqleh & Almasri, 2021; Kaawaase et al., 2021; Kythreotis & Constantinou, 2020). According to Alawaqleh and Almasri (2021), Herath and Albarqi (2017), and Beest et al. (2009), timeliness is assessed by considering how many days it takes the external auditor to sign his or her report after the end of the financial year. This research used the time between the last day of the fiscal year of the sample companies and the day the auditors signed the auditors' reports as the proxy for timeliness. This is scored using a five-point Likert scale.

Therefore, according to the method Mahboub (2017) used to construct the FR quality index, the first step in the determination of the FR quality index by operationalising the qualitative characteristics of the FR is a review of the relevant audited accounts of the pre-selected reporting entities. This involves scoring each of the items under each of the respective five constructs using the five-point Likert scale.

The second step is the determination of the sub-score for each of the constructs for each of the annual financial reports. This is achieved by getting the total score of each of the constructs and dividing it by the total number of items under the construct. This can be simplified by a formula as given below.

Sub-score = ______________________________ 100

The third step is the determination of the overall FR quality index of the annual financial report. The overall FR quality index is determined by aggregating all the scores of the five constructs and dividing the result by the total number of items under all the constructs (21 items in this case). The result is multiplied by 100 to convert the index into a percentage. The formula below shows this process.

FR quality index = ______________________________

x 100

To reduce bias during scoring, the researcher scores each of the financial reports at two different times. When a considerable difference in the first and second scores of an item becomes manifest, the average score is used for that item.

To capture primary data, the study employs the use of a questionnaire. The questionnaire is adapted from Bonsu et al. (2019) and Onyekwelu et al. (2015) to capture responses relating to the contribution of HR accounting disclosure to FR quality and the problems and challenges of HR accounting in Nigeria. The questionnaire captures data from professional accountants to identify the primary challenges of HR accounting and the reasons behind the exclusion of HR value (HRV) from being disclosed on the balance sheet. The questionnaire is on a five-point Likert scale.

3.6 Study Procedure and Ethical Assurances

This research is approved to be conducted by the Unicaf University Research Ethics Committee (UREC). Approval from UREC has been received before the commencement of data collection. The study involves the collection of both primary and secondary data. Secondary data was collected from the year 2019 audited accounts of the reporting entities selected. The reporting entities are those classified under the non-financial sectors of the NSE. The data collected are those related to voluntary HR accounting disclosure as defined by Syed (2009) and modified by Micah et al. (2012). This enabled the operationalisation of HR accounting disclosure, which is the independent variable of the research. The other set of data relates to the dependent variable, FR quality, which is sourced from the financial report based on the operationalisation of FR quality by Beest et al. (2009). The dependent and the independent variables were analysed using correlation and regression to determine the linkage between HR accounting and FR quality. Thus, detecting the contribution of HR accounting disclosure towards improving FR quality. This will help in determining the possibilities HR accounting holds with financial reporting.

The primary data was collected using an online questionnaire structured using a five-point Likert scale. The questionnaire was utilised in capturing the responses from professional accountants in Bauchi State, Nigeria, between July and September 2020. The data collected is used to identify the problems and challenges of HR accounting in Nigeria and to corroborate the result of the analysis of the secondary data.

The research is organised in such a way that it complies with known ethical standards in the conduct of academic research where human subjects are involved. The involvement of human subjects is in the area of filling out an online questionnaire by the respondents, who are professional accountants. To ensure that the respondents are aware of what the research is all about and give their consent to participate in the research, information relating to informed consent is included in the online questionnaire. The researcher assured the respondents that any information the respondents provided would be anonymous and confidential and would only be used for the research. Respondents were also informed that the information they provided could be used for academic publication as well as presentation in seminars and conferences.

The respondents were further informed that their participation in the research is voluntary and that they have the right to withdraw from the research at any stage without having to give reasons for doing so. The respondents were also informed that there would be no consequences for withdrawing from the research and that the data they might have provided would be traced and deleted and would not be used for the research. The researcher included his email address in the questionnaire to allow the respondents to contact him if they needed more explanation or clarification on the research. The respondents were asked to indicate that they understood what the research was all about and what they were required to do as participants and to indicate their consent to participate voluntarily by ticking the informed consent box before they could go to the first section and other sections of the online questionnaire. As part of the ethics expected of academic research, materials and ideas from other sources are acknowledged and referenced using an acceptable method of referencing in an academic write-up.

3.7 Data Collection and Analysis

Section 3.7 of Chapter Three of this thesis discusses the procedure adopted for collecting and coding data. The nature of the data and the analysis techniques This research involves using both primary and secondary data. The secondary data is extracted from audited annual accounts for the year 2019 of the selected non-financial companies, while the primary data is collected using an online questionnaire with professional accountants as the respondents. The data collection process is the process of gathering data from its source (Saunders et al., 2019). As mentioned in 3.2.4, this research adopts the multi-method quantitative method. The multimethod means that the researchers utilised two data sets (primary and secondary).

3.7.1 Data collection

Two types of data were collected for this research. Secondary data was extracted from the 2019 audited accounts of the selected non-financial reporting entities listed on the NSE. This data allows the extraction of the items to form the HR accounting disclosure index as the independent variable and the measure of FR quality as the dependent variable.

The primary data was gathered using an online questionnaire with a five-point Likert scale. The scale ranges from 1 (strongly disagree) to 5 (strongly agree). Professional accountants, who are the respondents, were required to respond to the questions relating to the problems and challenges of HR accounting in Nigeria. A total of eighty-one (81) emails and WhatsApp messages were sent to the sample. Six emails were returned undelivered with permanent errors. Thus, the link to the online questionnaire was delivered to seventy-five (75) respondents. Out of the seventy-five (75) respondents that received the link to the questionnaire, forty-six (46) respondents followed the link and filled out the questionnaire, with twenty-nine (29) opting not to fill out the questionnaire. The actual response represents a 61.33% active response rate. This rate is above the average response rate. Saunders et al. (2019) argue that for the majority of academic research involving the collection of primary data from individuals, an approximate response rate of 50% is reasonable. While an approximate response rate of 35 to 40% from representatives of organisations is reasonable, this shows that the response rate of 61.33% to the online questionnaire is adequate for the study.

3.7.2 Data analysis techniques

Generally, the statistical test one applies depends on the nature of the evidence a researcher gathers and the reasons for conducting the test (Bhatti & Sundram, 2015). In statistics, there are two categories of tests of hypotheses, namely: “parametric and non-parametric tests” (Onuoha et al., 2020, p. 1042; McClave & Sincich, 2018). The choice of using either parametric or non-parametric tests depends largely on the measurement of the variables to be tested (categorical, interval, or ratio scale), the normality of the distribution, and its independence. For example, before running a parametric test, there is a need to achieve certain conditions of validity for the analysis to be reliable. On the other hand, the non-parametric tests are not affected by most of the validity conditions of the parametric tests. Thus, non-parametric tests can be applied even if these conditions do not hold, and the reliability of the analysis will not be in jeopardy in any way (Rumsey, 2007).

In this study, the secondary data is analysed using regression analysis, a parametric test, while the primary data is analysed using the Kruskal-Wallis test, a non-parametric test. More details about the two statistical tests are in the subsequent paragraphs.

3.7.2.1 Statistical test for secondary data

The secondary data for the study was sourced from the published annual statements of the sampled companies and was subjected to statistical analysis using linear regression.

Regression analysis is a statistical tool used to determine the level of association between the independent and dependent variables (Mertens et al., 2017). It also helps to determine to what extent the independent variable explains the variations in the dependent variable (Stockemer, 2019; Rumsey, 2007). Simple regression deals with one dependent and one independent variable (Mertens et al., 2017). Stochastic regression analysis is used to determine the probability of occurrence of a phenomenon, predict a phenomenon, or understand the relationship between variables (Stockemer, 2019; Rumsey, 2007). In essence, “regression analysis techniques show the patterns or relationships in the data by determining how two or more variables relate to each other, the basis of many standard research questions” (Mertens et al., 2017, p. 22).

Certain conditions have to be met before regression analysis can be carried out. These include the level of measurement of the variables involved. The variables should either be in ratio or on an interval scale. Another condition for running regression is that there should be no significant outlier and the data should be normally distributed (normality test) (Mertens et al., 2017; Smith, 2003).

As argued by Mertens et al. (2017), regression analysis models allow for more precise and robust estimation. As a result, regression analysis is used in many research papers, including Jesuwunmi et al. (2019), Oko (2018), and Enyi and Akindehinde (2014), to determine the relationships between variables.

It is because of the positions mentioned above that this study used regression analysis to explore how the independent variable (HRAD) affects the dependent variable (FR quality). Therefore, the secondary data is used to test hypotheses one by one using regression analysis.

3.7.2.2 Statistical test for primary data

The Likert scale questionnaire is the tool used for collecting primary data for this research. The questionnaire is constructed to collect data from professional accountants on the contribution of HR accounting to FR quality and the problems and challenges of HR accounting. Since it is very difficult to determine the interval between the score points on the Likert scale, the data from the questionnaire is usually considered ordinal data. Ordinal data is more suited for nonparametric statistical tests. Additionally, the use of a nonparametric test is advised where the conditions for conducting a nonparametric test are not met (Mertens et al., 2017; Smith, 2003).

The Kruskal-Wallis test is one of the most commonly used nonparametric statistics for analysis and is the equivalent of ANOVA in parametric methods (Smith, 2003). McClave and Sincich (2018) and Mertens et al. (2017) recommend the use of nonparametric statistical methods like the Kruskal-Wallis test where the data does not meet the conditions for running ANOVA. The Kruskal-Wallis test is applied to compare more than two population medians. The test can determine whether the different populations differ significantly or not. The idea behind the test is to collect samples from each population, rank the data, and find out the pattern of distribution of the ranks among the samples (Rumsey, 2007). The Kruskal-Wallis test determines whether there is a statistically noticeable difference among groups (Mertens et al., 2017; Sawyer, 2017; Pallant, 2016). Boutchich (2020), Ijeoma (2015), Ijeoma and Arounu (2013), Bhutto et al. (2012), and Yahaya and Adenola (2011) all use the Kruskal-Wallis test.

For the reasons highlighted in the preceding paragraphs, this research used the Kruskal-Wallis test (a nonparametric test) to analyse the responses of professional accountants to find out if there existed a significant difference in their responses based on their groupings.

This study used the primary data to test hypotheses two, three, and four. The "Statistical Package for Social Sciences (SPSS)" (Jonathan et al., 2018, p. 67) is the statistical software adopted to aid data analysis.

3.8 Summary of the Chapter

This chapter provides information about the research methodology used in this study. This research adopted a multi-method quantitative approach and drew evidence from primary and secondary data. A deductive approach to theory development is used in conjunction with survey research to achieve the research objectives. In regards to time horizon, the research is a cross-sectional study involving data collection from 2019 audited accounts of sampled reporting entities and professional accountants.

The study used Taro Yamane's formula for calculating the sample size of a finite population to determine the sample sizes of the two populations. The independent variable, HR accounting disclosure, is determined using Syed's (2009) HRADI as modified by Micah et al. (2012), while the dependent variable, FR quality, is determined by the FR quality index as operationalised by Beest et al. (2009). The study determined the two variables using secondary data from the audited accounts of the sampled reporting entities. Furthermore, the study sourced the primary data for the research using an online Likert scale questionnaire adapted from Bonsu et al. (2019) and Onyekwelu et al. (2015). The study analysed the primary data to determine the contribution of HR accounting to FR quality and the problems and challenges of HR accounting in Nigeria.

The research complies with the generally accepted research ethics and has the approval of UREC.

Chapter 4: Discussion of Research Findings

4.1 Introduction

Chapter four contains the presentation of the findings of this research. There are four specific objectives for conducting this research. The first objective was to investigate the linkage between HR accounting disclosure and the FR quality of listed non-financial companies. The second objective was to analyse the data from professional accountants on the contribution of HR accounting disclosure to the improvement of FR quality. The third objective of conducting this research was to elicit the opinions of accountants on the reasons for not reporting HR value on the balance sheet. Lastly, the fourth objective was to find out the main problems with HR accounting in Nigeria.

The chapter is divided into three sections. The first section commenced with a discussion on the trustworthiness of the data used in the study. The second section is an annotation on the validity and reliability of the data collected for this study. This section includes an analysis of the results of the pilot survey. The third section concentrates on the results of the study. The presentation of the results commenced with the background information of the participants. Section three also contains a review of the statistical tools used in the study. The review of the statistics concentrated on the two types of analytical tools used for data analysis. The two analytical tools used for data analysis are regression analysis and the Kruskal-Wallis test. The research used regression to explore the linkage between HR accounting disclosure and FR quality and applied the Kruskal-Wallis test to analyse the data from the accountants.

The evaluation of the findings followed the presentation of the results and the statistical tests of the hypotheses. The essence of evaluating the findings was to highlight the meanings of the findings based on the available literature and theories. Like the presentation of the results, the evaluation followed the order of arrangement of the four hypotheses. The evaluation of the findings involves comparing the results with the existing literature, theory, and the conceptual framework of this research.

4.2 Trustworthiness of Data

The trustworthiness of the data for research highly influences the findings. Researchers face difficulties in ensuring that scientific studies are rigorous and trustworthy (Ibiamke & Ajekwe, 2017; Sajiniandanli, 1996). Humpherey and Lee (2004) argue that one of the specific problems of scientific research is the difficulty of ensuring rigour. Ensuring rigour or trustworthiness in research applies to all methods of conducting research. The methods are qualitative, quantitative, and mixed (Ibiamke & Ajekwe, 2017). Although the trustworthiness of data applies to all the methodologies of conducting research, researchers use different terminologies in describing the rigour of qualitative and quantitative studies. Researchers use a combination of the two terms in mixed-method research. According to Ibiamke and Ajekwe (2017), researchers establish trustworthiness in qualitative research by checking the credibility, transferability, conformity, dependability, and auditability of the data. On the other hand, researchers in quantitative research often apply terms like validity and reliability in establishing trustworthiness (Ibiamke & Ajekwe, 2017; Sajiniandanli, 1996). Researchers in qualitative research often use terms like creditability, transferability, and confirmability to establish validity. Researchers in qualitative research also use the terms auditability and dependability to establish reliability (Ibiamke & Ajekwe, 2017).

In qualitative research, credibility is a means of establishing trustworthiness by examining the data, data analysis, and conclusions reached in the study to check the accuracy of the findings (Ibiamke & Ajekwe, 2017; Sajiniandanli, 1996). Triangulation and persistent observation are among the techniques for assessing creditability in qualitative research. Other techniques used in establishing credibility in qualitative research are peer debriefing, member checking, prolonged engagement, and negative case analysis (Ibiamke & Ajekwe, 2017; Sajiniandanli, 1996).

Transferability in qualitative research refers to the suitability of applying the results of a study in other settings or contexts that ensure the generalisability of the research results (Leavy, 2017; Bhattacherjee, 2012; Kumar, 2011). In other words, transferability is a means of establishing external validity in qualitative research. To achieve this, a researcher has to provide evidence of the applicability of the results of the research in other settings, contexts, situations, populations, and times (Ibiamke & Ajekwe, 2017).

Confirmability is another means of proving validity in qualitative research (Ibiamke & Ajekwe, 2017; Kumar, 2011). Confirmability is the degree to which researchers can confirm the findings of the research. Confirmability ensures that the results of the study fully reflect the data collected from the participants (Ibiamke & Ajekwe, 2017). Some of the techniques used to establish confirmability include checking raw data in audit trails (Ibiamke & Ajekwe, 2017; Bhattacherjee, 2012; Kumar, 2011).

As stated earlier, researchers using the qualitative method use auditability and dependability to establish reliability in their research. Auditability refers to the indication of clear decision paths followed by a researcher (Ibiamke & Ajekwe, 2017). To show signs of auditability in a study, researchers usually indicate how they got the idea for the research topic and how they considered it, as well as the purpose of conducting the research. Researchers also explain how they arrive at their sample size and data collection procedure. In addition, researchers specify the methods of data analysis used and so on. Dependability, on the other hand, promotes replicability and internal consistency in research. Dependability also considers the changes that occur in research settings and how these changes affect the research. To increase dependability, researchers usually specify a systematic guide for conducting the research.

As indicated in chapter three (section 3.2.4.-Methodological choice), this research adopted the quantitative research methodology. Researchers using quantitative research establish trustworthiness or rigour through validity and reliability checks (Ibiamke & Ajekwe, 2017). To establish validity, quantitative researchers examine the measurements from a research instrument to see whether the measurement items provide meaningful inferences (Creswell & Creswell, 2018). In doing so, researchers investigate the research instrument for content validity, concurrent or predictive validity, and construct validity. In contrast, reliability checks the consistency of the measurement instrument (Ibiamke & Ajekwe, 2017). Cronbach's alpha test is the test researchers usually use for assessing the reliability of a research instrument (Kimberlin & Winterstein, 2008). The following sections provide explanations of the validity and reliability checks applied to this researcher.

Quantitative research involves measuring and assigning values to a phenomenon to measure it. Kimberlin and Winterstein (2008) maintain that researchers in public health use numbers to measure abstract things like the effectiveness of drugs, adherence to prescriptions by patients, and other theoretical constructs. Using numbers to measure abstract things is also applicable in the social and management sciences. In management science research, researchers make efforts to quantify abstract phenomena such as customer loyalty, satisfaction, competition, and motivation (Drost, 2004). Operationalisation of concepts and the development of measurement instruments or tests are some of the important aspects of quantifying a variable. The validity and reliability of a research instrument determine its quality (Kimberlin & Winterstein, 2008).

The reliability of a research instrument is simply the "consistency of measurement" of the instrument (Drost, 2004, p. 106). In other words, reliability is the consistency of the measurement of a research instrument over time or under varied conditions. Reliability assesses the propensity of a research tool to provide consistent results at different times or under varied conditions (Ibiamke & Ajekwe, 2017; Bhattacherjee, 2012; Kumar, 2011). It is the consistency of outcomes of different measurements made by the same measuring items in an instrument (Saunders et al., 2019). Therefore, reliability is the stability of a research instrument. It is about how well a research tool measures an item consistently each time under similar conditions (Ibiamke & Ajekwe, 2017; Bhattacherjee, 2012). The reliability of an instrument is the repeatability of the results it gives when it measures the same phenomenon under similar conditions. It is worthwhile to note that researchers do not measure the reliability of a measurement tool. Researchers can only estimate its reliability. In general, a research tool is reliable if it measures the same subject at two different times or over a period with the same results each time (Ibiamke & Ajekwe, 2017; Bhattacherjee, 2012; Kumar, 2011).

Saunders et al. (2019) explained that measurement validity, also known as internal validity, is the potential of a research tool to assess what it is intended to quantify. Drost (2004) noted that “validity is concerned with the meaningfulness of research components” (p. 114). Furthermore, Kimberlin and Winterstein (2008) describe validity as the level of accuracy with which a research instrument quantifies what it purports to determine. In essence, validity measures how well the results of research represent the true nature and conditions of a phenomenon. Validity indicates the level of the correctness and meaningfulness of any inferences made using the results of an investigation carried out using that research instrument. Validity exists if the data captured using the research instrument adequately measures the phenomenon.

Drost (2004) annotates four types of validity that answer basic questions regarding research. The first type of validity is statistical conclusion validity. According to Drost (2004), this type of validity test answers questions about the possibility of the existence of a relationship among the research variables under investigation. If there is a relationship between the variables, the second type of validity, internal validity, helps answer questions about causality among the variables. If the results show that there is causality in the relationship, the third type of validity test, construct validity, determines how correctly a researcher operationalised a concept.

Operationalisation involves transforming or translating a concept, construct, behaviour, or idea into measurable items in the research instrument. The fourth type of validity is external validity, which considers the likelihood of generalising the findings of the research to a larger population (Drost, 2004).

As stressed by Saunders et al. (2019), in treating validity issues relating to the questionnaire as a data collection tool in research, researchers mostly examine research instruments for content, construct, and criterion validity. This research adopted this approach and checked the content, construct, and criterion validity of the questionnaire used in this research.

Content validity determines the sufficiency of the questions in a questionnaire to ensure sufficient coverage of the construct or concept the questions are to measure. Content validity has to do with the scope of the questions in a questionnaire. The aim of assessing content validity is to determine how a set of test items (questions) in a questionnaire captures enough samples of all the factors that can help to quantify a concept, idea, or construct (Kimberlin & Winterstein, 2008). Establishing content validity is based upon the understanding of professionals and specialists in the area to be investigated (Kimberlin & Winterstein, 2008). The reason for this may not be unconnected with the fact that no statistical test for determining validity exists. The question of whether a research tool adequately covers the area of investigation depends on the judgement of experts (Kimberlin & Winterstein, 2008).

Construct validity is another type of validity check applied in the research questionnaire of this research. According to Saunders et al. (2019), construct validity examines the individual questions (scale items) in a questionnaire to establish whether the questions sufficiently reflect the existence of the construct. In other words, construct validity assesses the correctness of the operationalisation of constructs, concepts, or ideas by a researcher in transforming or translating the constructs, concepts, or ideas into questions in the questionnaire (Drost, 2004).

Content validity is of two types: translation-related validity and criterion-related validity (Drost, 2004). Translation-related validity looks at how the transformation or translation of a research construct into test items in the questionnaire was done to ensure that the transformation or translation reflects the true meaning of the construct (Kimberlin & Winterstein, 2008). Construct validity, according to Kimberlin and Winterstein (2008), is established based on judgement following an extensive literature review on the measurement of the constructs in the relevant areas. To assess construct validity, a researcher has to appraise the theoretical and known relationships between the constructs.

4.3 Reliability and Validity

This sub-section takes a critical look at how the research tool used in this research met the reliability and validity criteria. Reliability tests ensure that the research questionnaire for this study is reliable and can give similar results in another survey involving the same population. A reliable research instrument needs to be valid. Therefore, this section also shows how the research questionnaire for this study is valid.

4.3.1 Reliability tests

Over the years, researchers have devised methods of establishing the reliability of a measurement tool. One of the methods of estimating reliability is by using a technique known as stability over time. Under this technique, researchers use the test-retest method. Another technique used in evaluating reliability is the equivalence technique. Under this technique, researchers make use of the alternative form. Internal consistency is another technique for estimating reliability. According to Saunders et al. (2019) and Drost (2004), some of the methods researchers use under this technique include Cronbach's alpha method, the splithalves method, and the inter-rater method. However, Cronbach's alpha method appears to be the most popular (Saunders et al., 2019). This research used Cronbach's alpha to assess the reliability of the research questionnaire.

Saunders et al. (2019) posit that Cronbach’s alpha is a method commonly adopted by researchers in establishing the consistency of research instruments. Cronbach's alpha is one of the most widely used methods for estimating internal consistency in research (Kimberlin & Winterstein, 2008). It is the “most popular method of testing for internal consistency in the behavioural sciences” (Drost, 2004, p. 111). It is a statistical test that determines the consistency of responses to related test items, which makes a scale for measuring a particular construct or concept (Saunders et al., 2019). When computed, Cronbach’s alpha has values ranging from 0.00 to 1.00 (Saunders et al., 2019). Basing their arguments on Nunnally (1978), both Saunders et al. (2019) and Drost (2004) recommend that an alpha value of 0.70 and above is enough justification to accept a measurement tool as reliable, judging from its internal consistency. Improving the alpha value above 0.80 is useless (Drost, 2004).

Internal consistency measures the reliability of the individual questions or items in research instruments (Leavy, 2017; Bhattacherjee, 2012; Kumar, 2011). Thus, it determines how consistent the test items are among themselves. It also measures how accurately a series of questions can measure a particular characteristic, behaviour, or factor (Leavy, 2017; Bhattacherjee, 2012; Kumar, 2011). The average intercorrelations among the measurement items in a research tool indicate the level of internal consistency of the measurement tool (Leavy, 2017; Bhattacherjee, 2012; Drost, 2004).

All the questions in the research questionnaire have been tested using Cronbach’s alpha test to determine the internal consistency of the research tools. The presentation of the results of the test is in Table 5.

Table 5: Internal consistency using Cronbach's Alpha

Construct	No. of Test Items	Cronbach's Alpha Value	Decision
The nature of HRA	8	0.80	Reliable
Reasons for excluding HRV from balance sheet (SFP)	8	0.72	Reliable
Problems and challenges of HRA	8	0.71	Reliable

Source: Researcher's construct 2021

The results in Table 5 indicate that each of the three constructs of the research had an alpha value above the 0.70 threshold level recommended by Saunders et al. (2019) and Drost (2004). Therefore, the questionnaire for this research is internally consistent and therefore reliable.

4.3.2 Validity of data

To establish content validity in the questionnaire used in this research, the questions covered all the possible aspects of the constructs the questionnaire measures. The formulation of the questions followed an extensive review of related literature. Additionally, based on the suggestion by Saunders et al. (2019), three professional accountants reviewed and commented on the questionnaire. These experts examined the questions and determined whether they adequately cover the topics and relate in terms of meaning and relevance. The questionnaire underwent several modifications to accommodate the suggestions made by the expert to ensure content validity exists.

The measures used to ensure the existence of construct validity in the questionnaire for this research include dividing the questionnaire into four parts, with each section covering a particular aspect of the study. The first part was to collect demographic and related information from the respondents. Each of the remaining three parts of the questionnaire covered a particular construct and the specific aim of the study. The advice received from the experts and evidence found in the literature guided the dividing of the questionnaire into four sections (Bonsu et al., 2019).

4.3.3 Pilot study

The questionnaire for this research was scrutinised at two levels before its final release online for the respondents to access. The first level of scrutiny was at the expert level, where three professional accountants considered knowledgeable in the field scrutinised the questionnaire. These experts offered suggestions and advice, which led to the improvement of the research questionnaire. The experts that examined the questionnaire included a professor in accounting and two accountants with master's degrees in accounting. One of the master's degree holders was a lecturer in a polytechnic, while the other was an accountant in a public organisation. Tastos and Bekiaris (2012) used a similar approach in their study.

Pilot testing of a research tool is one way of ensuring its validity and reliability before conducting research (Saunders et al., 2019). The extent to which a research tool gives reliable results determines the reliability of the instruments (Borg et al., 2013). A pilot study is a replica or rehearsal of the main survey conducted on a small scale (Kothari, 2004). It is a trial or smallscale research carried out as part of the preparation for conducting the main study (Beck, 2003). Saunders et al. (2019) posited that pilot testing a research tool refines the tool and makes it easy for the respondents to understand.

The literature underlines the necessity for a pilot study in research. For example, Bryman (2008) argues that it is desirable to pilot test a questionnaire before its administration to the respondents. The purpose of the pilot survey is to strengthen the reliability and validity of the research instrument for the study. According to Lancaster et al. (2004), pilot studies of highprecision research usually cover about one to ten percent of the sample size of the main research. The pilot test study included seven professional accountants, representing approximately ten percent of the survey sample size. The participants for the pilot study were selected randomly. The respondents filled out the questionnaire, and the responses received were analysed. This information helped in modifying the questions. The responses received from the pilot test did not form part of the responses received in the final study.

4.3.3.1 Pilot study procedure

As stated in section 4.3, a pilot study preceded the main study. The pilot test was to examine the feasibility of the primary research and to check the validity and reliability of the questionnaire. The pilot study comprised two stages: a pre-test and a pilot test. The pre-test involved three participants. The pre-test aimed to fine-tune the questions for easy comprehension.

The pilot test involved seven professional accountants purposefully chosen for the study. Each of the participants received a copy of the questionnaire. The pilot aimed to ensure uniformity of comprehension of the individual questions by each respondent.

The questionnaire used in the pilot test has two sections. Section A contains questions for collecting demographic data, and section B includes:

 Questions about whether HR accounting disclosure improves FR quality.

Qusestions about the reasons for not reporting HR value on the balance sheet, and

Questions realing to the main problems of HR accounting in Nigeria.

4.3.3.2 Pilot study results

Data collected in the pilot study were analysed using descriptive statistics. Tables 6 to 9 show the summary of the data and the results of hypotheses tests. Table 6 is the presentation of the demographic data.

Table 6: Demographic data (pilot)

Gender	Male	Female	Total
Response	6	1	7
Percentage	71.4	28.6	100

Professional affiliation	ANAN	ICAN	Total
Response	5	2	7
Percentage	71.4	28.6	100

Sector of emplyment	Academia	Public/Private sector	Practice	Total
Response	2	4	1	7
Percentage	28.6	57.1	14.3	100.0

Years of experience	0 - 10	11 - 20	21 - 30	More than 30
Response	1	5	1	0
Percentage				

Academic qualification	Diploma	1st Degree/HND	Masters Degree	Doctorate Degree	Total
Response	0	4	2	1	7
Percentage	0.0	57.1	28.6	14.3	100

The demographic data collected during the pilot study (presented in Table 6) show that out of the seven participants, six are male, and one is female. One of the participants has a Doctorate, two have a master's degree, and the remaining four have a first degree/HND. Two participants are members of ICAN, and the remaining five are members of ANAN. Two participants are accountants in academics, one accountant in private practice and four accountants in the public and private sectors. One participant has a work experience between 21 to 30 years, five have work experience between 11 to 20 years, and one has work experience between 1 to 10 years.

The results of testing the tree hypotheses using Kruskal-Wallis are presented in Table 7. As the results indicate, all three null hypotheses were retained. Hypothesis one, which postulates that there is no significant difference among the three groups of accountants on the contribution of HR accounting disclosure to improvement in FR quality, has a p-value of 0.115. Hypothesisthree of the study, which envisages no significant difference among the three groups of accountants on the reason for not recognising the HR value on the balance sheet, has a p-value of 0.687. Lastly, hypothesis-four, which postulates no significant difference among the three groups of accountants regarding the main problem of HR accounting in Nigeria, has a p-value of 0.318.

Table 7: Hypotheses test summary (pilot test)

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of HRAD improves FRQ is the same across categories of Sector of employment.	Independent-Samples Kruskal-Wallis Test	0.115	Retain the null hypothesis.
2	The distribution of reasons for excluding HRV from balance sheet is the same across categories of Sector of employment.	Independent-Samples Kruskal-Wallis Test	0.687	Retain the null hypothesis.
3	The distribution of main problem of HRA is the same across categories of Sector of employment.	Independent-Samples Kruskal-Wallis Test	0.318	Retain the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

Furthermore, the pilot test results indicate that the main reason conventional accounting does not recognise the value and investment in HR on the balance sheet is the lack of a generally accepted valuation model. As shown in Table 8, the lack of valuation model for HR has a mean score of 4.71 and minimum and maximum scores of 4 and 5, respectively. The second reason for not reporting the value of HR on the reporting entities' balance sheet is the stakeholders' lack of interest in knowing the HR value (a mean score of 2.71). The third reason is the fear of exposing a firm's competitive advantage to its competitors.

Table 8: Reasons for excluding the HR value from balance sheet (pilot study)

Reason for excluding HRV from Balance sheet	N	Minimum	Maximum	Mean	Std. Deviation
Lack of valuation model for HR	7	4	5	4.71	.488
Sensitivity of HR data	7	1	2	1.71	.488
Wages & Salary treated in income statement	7	1	2	1.43	.535
Lack of active market for HR	7	1	2	1.86	.378
Fear of exposure to competitors	7	1	3	2.14	.900
FR will be missleading of HRV is included	7	1	3	1.86	.900
Stakeholders not interested in HRV	7	1	4	2.71	1.113
Valid N (listwise)	7				

The pilot test results also indicated that the absence of an accounting standard is Nigeria's main HR accounting problem. From Table 9, the lack of accounting standards on HR accounting has a mean score of 3.29, a minimum and maximum score of 2 and 5, respectively. Also, from

Table 9, with a mean score of 3.00, the apprehension that management of reporting entities would manipulate HR accounting information is the second major problem. The third problem with a mean score of 2.71 is the absence of an established audit framework for HR accounting.

Table 9: Main problems of HR accounting in Nigeria (pilot study)

Main problem of HRA in Nigeria	N	Minimum	Maximum	Mean	Std. Deviation
Lack accounting standard on HRA	7	2	5	3.29	1.113
Uncertainty in service period	7	1	2	1.57	.535
Tax laws do not recognised HRV as asset	7	1	2	1.57	.535
Lack of valuation model of HR is the main problem	7	2	4	2.86	.900
Fear of manipulation by management	7	2	4	3.00	1.000
Lack of audit framework for HRA	7	2	4	2.71	.756
Low awareness level about HRA	7	1	4	2.29	.951
Confidentiality of employees' record	7	1	2	1.71	.488
Valid N (listwise)	7				

The pre-test and the pilot test led to incorporating some changes into the questionnaire and the overall research methodology proposed in the main study. The following section contains a summary of these changes.

4.3.3.3 Summary of methodological changes after pilot studies

The results and data analysis in the pilot study informed some critical changes to the proposed methodology. Firstly, the questions adopted from Bonsu et el. (2019) and Onyekwelu et al. (2015) were modified to improve the validity and reliability of the questionnaire used in the study. A summary of Cronbach's Alpha test is in Table 5, and the outline of the changes made to the questionnaire adopted is in appendix 3.

The second change fronted by the pilot study was the change in the mode of distribution of the questionnaire. Most participants in the pilot test advised a change in the method of issuing the questionnaire from physical (paper) to online in the main study.

Thirdly, following advice from five participants in the pilot test, the question on academic qualification and question nine were dropped from the questionnaire used in the main study. The participants considered the questions irrelevant.
Fourthly, the questions in section B of the questionnaire were also grouped into three, according to which construct they measured. Questions one to eight were grouped under HR accounting disclosure improves FR quality. The main study also dropped the use of ranges for years of experience. The respondents had to provide the exact number of years of work experience.

Lastly, at the pre-test, the proposed data analysis technique, Chi-square was changed. Therefore, the pilot and the main studies used descriptive statistics and Kruskal-Wallis test for data analysis. The reason for opting to use the Kruskal-Wallis test is discussed in section 3.7.2.2.

4.4 Results

After the data collection exercises, the main task is to present the data. The subsequent subsections are for the presentation of the data, which commenced with the demographic data, followed by other data and hypotheses testing. The summary of the data is in tables, figures, and narrative forms.

4.4.1 Background information

The data collected from the respondents include demographic data, including years of service, sector of employment, and membership in a professional association. The results are in Tables 6 to 10 and Figure 13.

Table 6 highlights a summary of the background data of the respondents. Table 6 shows the responses received from all the forty-six (46) participants regarding their membership in a recognised professional accounting association in Nigeria, the sector where the respondents were employed, years of experience and gender.

Table 10: Demographic information

		Professional affiliation	Sector of employment	Years of experience	Gender
N	Valid	46	46	46	46
	Missing	0	0	0	0

Source: Survey data, 2020

4.4.1.1 Professional affiliations of respondents

The first question that the respondents answered was about their membership in a recognised professional accounting body in Nigeria. The question is crucial as it is the inclusion criteria for participation in the research. As Table 11 shows, all the forty-six (46) respondents were members of either ANAN or ICAN. Table 11 further shows that forty (40) respondents, representing 87.0% of the total number of respondents, were members of ANAN, while six respondents, representing 13.0%, were memsbers of ICAN. None of the participants has dual membership.

Table 11: Professional affiliations of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Association of National Accountants of Nigeria (ANAN)	40	87.0	87.0	87.0
	Institute of Chartered Accountants of Nigeria (ICAN)	6	13.0	13.0	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

4.4.1.2 Sector of employment of respondents

To know the area of specialisation in terms of recent work experience, the research participants chose the sector where they held permanent employment when filling out the questionnaire.

The questionnaire made provision for three sectors of employment. Therefore, the respondents had to select only one of the sectors. The responses to the question on permanent occupation are in Table 12. The table indicates that among the respondents, there are ten (10) accounting theoreticians employed in tertiary institutions (representing 21.7% of all the respondents). Nine (9) respondents, representing 19.6% of the participants, worked as accountants engaged in private practice, providing services such as audit and consultancy. Twenty-seven (27) (58.7% of the respondents) worked as accountants in the public and private sectors.

Table 12: Sector of employment of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Accounting Theoretician (academics)	10	21.7	21.7	21.7
	Accountant in private practice (audit, consultancy, etc.)	9	19.6	19.6	41.3
	Accountant in public/private sector	27	58.7	58.7	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

4.4.1.3 Work experience of respondents

Table 12 and Figure 13 show the years of experience of the research participants. Table 13 shows the years of experience of the research participants. The participants with the lowest number of years of experience were those who spent two (2) years on the job, while thirty-six (36) was the highest number of years of experience of the participants. Most of the participants have work experience of seven (7) years.

Table 13: Summary statistics of work experience

N	Valid	46
	Missing	0
Mode		7
Minimum		2
Maximum		36

Source: Survey data, 2020

Figure 13 shows the distribution of the work experience of the participants in years. According to Figure 8, the modal year of experience is eight years with seven (7) participants. Only one (1) participant has two years of work experience, the lowest years of experience. One (1) participant has 36 years of work experience, which is the highest. Figure 13 also shows that only two (2) respondents, representing 4% of the total respondents, have work experience of less than five years. The remaining forty-two (42) respondents, representing 96% of all the participants, had work experience ranging from 5–36 years.

Figure 13: Years of work experience
(Source: Survey data, 2020)

4.4.1.4 Gender of respondents

Both males and females participated in the research. Table 14 displays the result of the gender distribution of the participants. Out of the forty-six (46) participants, forty (40) respondents, representing 87.0% of the total respondents, are male, while six (6) respondents, representing 13.0% of the respondents, are females.

Table 14: Gender of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	40	87.0	87.0	87.0
	Female	6	13.0	13.0	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

4.4.2 Descriptive statistics

Section 4.4.2 contains data collected to measure the variables of the study. The section also exhibits the results of the descriptive statistics analysis in several tables. The tables present the results of the data analysis in both numbers and percentages. The presentation focuses on the four objectives of the research.

4.4.2.1 Research objective one: Effect of HR accounting disclosure on FR quality To answer research question one and achieve the aim of objective one, the study used the secondary data retrieved from the 2019 financial reports of eighty-six (86) non-financial companies. The study involves the construction of the HR accounting disclosure index and the FR quality index from the data available in the financial reports. Table 15 presents the summary of the number of the sampled companies.

Table 15: Summary of sampled non-financial companies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agriculture	4	4.7	4.7	4.7
	Conglomerates	4	4.7	4.7	9.3
	Construction/Real Estate	7	8.1	8.1	17.4
	Consumer Goods	15	17.4	17.4	34.9
	Healthcare	8	9.3	9.3	44.2
	ICT	7	8.1	8.1	52.3
	Industrial Goods	10	11.6	11.6	64.0
	Natural Resources	3	3.5	3.5	67.4
	Oil and Gas	9	10.5	10.5	77.9
	Services	19	22.1	22.1	100.0
	Total	**86**	**100.0**	**100.0**	

Source: Survey data, 2020

4.4.2.2 Research objective two: Impact of HR accounting disclosure on FR quality

The second research objective was to determine whether HR accounting disclosure improves FR quality based on the responses from professional accountants. To answer the second research question and achieve objective number two of this study, the questionnaire contains eight questions to assess how the respondents perceive the effect of HR accounting disclosure on FR quality. Tables 12 to 19 show the results of the responses to these questions.

The first question asked the respondents to show their agreement or otherwise with the statement about the importance of human resources as assets to non-financial companies. Table 12 shows the summary of the responses from the respondents.

Table 16: HR are important assets to non-financial companies in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	10.9	10.9	10.9
	Agree	11	23.9	23.9	34.8
	Strongly Agree	30	65.2	65.2	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 12 above shows that 10.9% of those polled strongly disagreed with the statement, while 23.9% agreed. The remaining 65.2% strongly agreed that human resources are an important asset of non-financial companies. Dichotomising the responses into agreement and disagreement with the statement shows that 89.1% of the respondents agreed that human resources are important assets to non-financial companies, against 10.9% who disagreed with the statements.

The second question relating to the second objective of the study asked the respondents whether they agreed that non-financial reporting entities in Nigeria should report the values of their human resources in their financial reports. Table 17 shows a summary of their responses.

Table 17: The annual financial reports should include the value of HR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	6.5	6.5	6.5
	Neutral	6	13.0	13.0	19.6
	Agree	14	30.4	30.4	50.0
	Strongly Agree	23	50.0	50.0	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survev data. 2020

Table 13 above shows that 6.5% of the respondents did not see the need for reporting the HR value in the financial reports. Thirteen percent of the respondents were neutral, while 30.4% agreed and 50.0% strongly agreed that the financial statements should include the value of human resources. These results indicate that the majority (80.4%) of respondents support including the value of HR in the audited statements, compared to 6.5% who do not support the view.

The next question asked the respondents whether they believed that failure to report the HRV in the financial reports distorts the fair view of the reports. Table 18 is the presentation of the results of responses to the question. From Table 18, 10.9% did not believe that non-reporting

HR values distorts the "true and fair view" of the financial reports (Omole et al., 2017, p. 122). Table 18 also shows that 17% of the respondents were neutral, 41.3% agreed, and 30.4% strongly agreed with the statement.

Table 18: Exclusion of HR value from the financial reports distorts the true and fair view of the reports

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	10.9	10.9	10.9
	Neutral	8	17.4	17.4	28.3
	Agree	19	41.3	41.3	69.6
	Strongly Agree	14	30.4	30.4	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 14 indicates that most of the respondents (71.7%) believed that excluding HR value from the audited accounts of non-financial entities in Nigeria distorts the true and fair view of the reports. The data implies that most of the respondents support the reporting of HR value in financial reports.

The respondents also indicated their agreement with the usefulness of information on HR value in investing decisions. Table 19 contains a summary of the responses.

Table 19: Information on investment in HR, HR value & decisions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	2	4.3	4.3	4.3
	Agree	19	41.3	41.3	45.7
	Strongly Agree	25	54.3	54.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

From Table 19, only 4.3% of the respondents disagreed that giving HR investment information is useful for investment decisions. The remaining 41.3% agreed that such information is useful for investment decisions, while 54.3% strongly agreed that such information is useful for investment decisions. In summary, most of the respondents (95.6%) believed that information on investment in human resources supports investment decisions.

The respondents indicated whether HR accounting disclosure improves the quality of FR. Table 16 contains a summary of the understanding of the respondents on the issue. Table 20 shows that 2.2% of the respondents believed that HR accounting disclosure does not improve FR quality, while 10.9% were neutral. In contrast, 30.4% of the respondents accepted that HR accounting disclosure improves the quality of FR, and 56.5% strongly believed that disclosing HR accounting information improves FR quality. The results show that most of the respondents (86.9%) believed that disclosing HR accounting information in financial reports helps in improving FR quality.

Table 20: HRAD information improves the FR quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.2	2.2	2.2
	Neutral	5	10.9	10.9	13.0
	Agree	14	30.4	30.4	43.5
	Strongly Agree	26	56.5	56.5	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

The presentation of HR value in the financial reports is an issue discussed in the literature. Human resources activists like Arkan (2016) believe that reporting entities should recognise HR value on the balance sheet as an asset. On the other hand, Ying-hong (2006) believes that reporting entities should disclose HR value in the notes to the accounts, while other researchers believe that reporting entities should present HR value in separate HR accounting statements. The last three questions relating to the second objective of this study asked the respondents how best to report HR value in the financial reports.

Table 21: Non-financial companies should recognise the monetary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	4	8.7	8.7	8.7
	Neutral	3	6.5	6.5	15.2
	Agree	28	60.9	60.9	76.1
	Strongly Agree	11	23.9	23.9	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 21 shows the summary of the responses from the respondents on whether non-financial reporting entities in Nigeria should recognise HR value as an asset on the balance sheet. Table 21 shows that 8.7% disagreed with the statement, while 6.5% were neutral. Table 21 further reveals that 60.9% of the respondents agreed, while 23.9% strongly agreed with the statement. The results imply that 84.8% of the respondents agreed that non-financial companies in Nigeria should recognise HR value as an asset on the balance sheet.

The study sought to understand whether non-financial companies should present HR value in the notes to the accounts of the financial reports. Table 22 is a presentation of a summary of the responses of the respondents to the statement.

Table 22: Non-financial companies should be present the monetary value of HR of in the notes to the accounts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.2	2.2	2.2
	Disagree	17	37.0	37.0	39.1
	Neutral	7	15.2	15.2	54.3
	Agree	21	45.7	45.7	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 22 indicates that 2.2% of the respondents strongly disagreed, and 37% disagreed with the statement. Table 18 also shows that 15.2% of the respondents were neutral. Table 22 further indicates that 45% agreed with the assertion. It is clear from the results that 39.2% of the respondents did not support presenting HR value in the notes to the accounts, while 15.2%

remained neutral. The remaining 45.7% supported the idea of reporting HR value in the notes to the accounts.

The study asked whether non-financial companies should present the HR value in a separate HR accounting statement in the financial reports. Table 23 shows the results.

Table 23: Reporting HR value in HR Statement in the financial reports

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	10.9	10.9	10.9
	Neutral	10	21.7	21.7	32.6
	Agree	24	52.2	52.2	84.8
	Strongly Agree	7	15.2	15.2	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

From Table 23, 10.9% of the respondents disagreed with the statement that non-financial companies should present HR value in separate HR accounting statements. Additionally, 21.7% of the respondents were neutral, while 52.2% and 15.2% agreed and strongly agreed with the statement, respectively. The results mean that only 10% of the respondents did not support presenting HR value in separate HR accounting statements.

It is necessary to compare the results in Tables 21, 22 and 23 to know which of the proposed three ways of presenting HR value in financial reports has the highest score. Analysis of the results in Table 21 shows that 84.8% of the respondents supported recognising HR value as an asset on the balance sheet. An analysis of the results in Table 22 shows that 45.7% of the respondents supported presenting HR values in the notes to the accounts, while an analysis of the results in Table 23 shows that 67.4% of the respondents supported presenting HR values in separate HR accounting statements. It is clear from the analyses that most of the respondents (84.8%) favoured recognising HR value as an asset on the balance sheet. This position agrees with the call made by Ezeagba (2014).

4.4.2.3 Research objective three: Reasons for excluding investment in HR from SFP

The third objective of this study is to investigate the rationale behind not reporting the value of HR investment on the balance sheet under the conventional accounting system. To this end, the questionnaire contained eight statements to help collect data from the respondents on the issue. Table 24 to Table 31 show the results of the responses captured using the questionnaire.

The first item in the questionnaire under this objective sought to find out the understanding of the respondents about the treatment of investment in human resources under the conventional method. The participants were asked if they agree that the traditional accounting system does not recognise HR investment as an asset. The result is in Table 24.

Table 24: Conventional accounting does not recognise investment in HR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.2	2.2	2.2
	Neutral	3	6.5	6.5	8.7
	Agree	15	32.6	32.6	41.3
	Strongly Agree	27	58.7	58.7	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 20 shows that a significant majority of the respondents (91.3%) agreed that, under the conventional accounting system accountants do not treat investment in HR as an asset. This position is contrary to the position of a minority of the respondents (2.2%) who disagreed, while 6.5% remained neutral. Many researchers have confirmed that traditional accounting sees investment in HR as a recurrent expenditure instead of assets. Some of the studies that reported this include Ibarra and Cosico (2016); Hossain et al. (2015); and Akintoye et al. (2015).

Haven established that traditional accounting does not treat investment in HR as an asset, the subsequent questions in the questionnaire went ahead to investigate the reasons for excluding investment in HR from being recognised on the balance sheet as an asset. Table 25 presents the results of responses to the statement that the lack of a generally accepted valuation method for human resources is the reason for not treating investment in HR as an asset. Table 24 shows that a significant majority of the respondents (91.3%) agreed that under the conventional accounting system, accountants do not treat investment in HR as an asset. This position is contrary to the position of a minority of the respondents (2.2%) who disagreed, while 6.5% remained neutral. Many researchers have confirmed that conventional accounting considers investments in HR as expenses instead of assets. Some of the studies that reported this include Ibarra and Cosico (2016); Hossain et al. (2015); and Akintoye et al. (2015).

Table 25: Lack of a generally accepted valuation method as the reason for the exclusion of HR value from statement of financial- position

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	3	6.5	6.5	6.5
	Neutral	3	6.5	6.5	13.0
	Agree	23	50.0	50.0	63.0
	Strongly Agree	17	37.0	37.0	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 25 above shows that a significant majority of the respondents (87%) agreed that the lack of a valuation model for HR is the reason for not treating investment in HR as an asset. In contrast, 6.5% of the respondents did not see a lack of an acceptable means of valuation as the reason for not recognising investment in HR as an asset. Another 6.5% of the respondents were neutral.

Table 26 shows the summary of the data on whether the sensitivity of the HR information is the reason for not recognising the value of investments in HR on the balance sheet.

Table 26: The monetary value of HR is not recognised in the SFP because it is a sensitive organisational data

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	8	17.4	17.4	17.4
	Disagree	18	39.1	39.1	56.5
	Neutral	7	15.2	15.2	71.7
	Agree	12	26.1	26.1	97.8
	Strongly Agree	1	2.2	2.2	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 26 shows that 17.4% of the respondents strongly disagreed with the statement; 39.1% disagreed with the statement, and 15.2% were neutral. Table 26 further shows that 26.1% agreed with the statement, while 2.2% strongly agreed with the statement. The results indicate that 56.5% of the respondents did not believe that the sensitivity of human resources information is the reason for not treating investment in HR as an asset. The remaining 28.3% agreed with the statement.

The next item in the question asked the respondents whether they agree that the treatment of reward for labour (wages and salaries) as an expense is the reason for not treating investment in human resources as assets. The responses to this are in Table 27. The results in Table 27 show that 6.5% of the respondents strongly disagreed with the statement, 58.7% disagreed with the statement, and 13% were neutral. 19.6% of the respondents agreed with the statement, while 2.2% strongly agreed. This analysis shows that most of the respondents (65.2%) did not believe that the treatment of wages and salaries as expenses in the income statement was the reason for not treating investment in HR as an asset.

Table 27: The monetary value of HR is not recognised in the SFP because wages and salaries have been treated in the income statement as a reward for labour

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	6.5	6.5	6.5
	Disagree	27	58.7	58.7	65.2
	Neutral	6	13.0	13.0	78.3
	Agree	9	19.6	19.6	97.8
	Strongly Agree	1	2.2	2.2	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

The respondents also indicated their agreement or otherwise with the statement, which postulates that the inclusion of HR value in the balance sheet is meaningless because HR does not have an active market. Table 28 shows the summary of the responses to the statement.

Table 28: Inclusion of HRV as an asset in the SFP is meaningless

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	3	6.5	6.5	6.5
	Disagree	30	65.2	65.2	71.7
	Neutral	7	15.2	15.2	87.0
	Agree	6	13.0	13.0	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 28 shows that 6.5% of the survey participants strongly disagreed with the notion that the reason for not treating human resources as an asset was due to the non-availability of an active market for human resources. The results also show that 65.2% of the respondents disagreed with the statement, while 15.2% remained neutral. The remaining 13% of the study participants agreed with the statement. Therefore, most of the respondents (71.7%) did not agree that the lack of an active market for human resources was the reason for not treating investment in human resources as an asset on the balance sheet.

Table 29 contains the results of a response to the statement that the reason for not treating investment in HR as an asset is that doing so will expose a business to its competitors.

According to the table, 45.7% of respondents disagreed with the statement, 13% were neutral, and 41.3% agreed that recognising HR value as assets on the balance sheet exposes a company to competitors. The results show that the respondents marginally opted to disagree with the notion that fear of exposing a company to its competitors was the reason for not recognising HR value in the balance sheet.

Table 29: Recognising HR as an asset in the SFP will expose a business to its competitors

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	21	45.7	45.7	45.7
	Neutral	6	13.0	13.0	58.7
	Agree	19	41.3	41.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 30 is for the results of the survey participants on the notion of whether the financial position of non-financial companies will be misleading if the value of human resources is recognised as an asset. The results show that 10.9% of the respondents strongly opposed this notion; 78.3% also disagreed with the idea, and 2.2% chose to be neutral. Only 8.7% of the respondents agreed that recognising the value of human resources as an asset would make the financial positions of non-financial companies misleading. These results imply that a significant majority of the respondents (89.2%) believed that recognising the monetary value of human resources would not distort the financial position of a non-financial company.

Table 30: The financial position of a non-financial company may be

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	10.9	10.9	10.9
	Disagree	36	78.3	78.3	89.1
	Neutral	1	2.2	2.2	91.3
	Agree	4	8.7	8.7	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Another possible reason for not recognising the value of human resources as an asset is that stakeholders are not interested in knowing the value of human resources. Table 31 displays the summary of the responses to the possible problem of a lack of interest by stakeholders.

Table 31: Stakeholders are not interested in the monetary value of HR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	2	4.3	4.3	4.3
	Disagree	26	56.5	56.5	60.9
	Neutral	7	15.2	15.2	76.1
	Agree	9	19.6	19.6	95.7
	Strongly Agree	2	4.3	4.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 31 shows that 4.3% of the respondents strongly disagreed with the statement that stakeholders did not care about HR value. 56.2% of the respondents disagreed with the statement. However, 4.3% strongly agreed, while 19.6% agreed with the statement. The remaining 15.2% were neutral. Therefore, most of the respondents (60.5%) believed that stakeholders were interested in the monetary value of human resources.

4.4.2.4 Research objective four: The main problems of HR accounting in Nigeria The fourth target of this study was to find out the problems that hinder the full adoption of HR accounting in Nigeria. To this end, the questionnaire contains eight questions about the problems and challenges of HR accounting. Tables 32 to 39 show the results of the data collection.

The respondents indicated their agreement with the statement that said the absence of a specific accounting standard on HR accounting is the main predicament of HR accounting in Nigeria. Table 32 presents a summary of the responses to the statement.

Table 32: Absence of specific accounting standard on HR accounting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	5	10.9	10.9	10.9
	Neutral	8	17.4	17.4	28.3
	Agree	14	30.4	30.4	58.7
	Strongly Agree	19	41.3	41.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 32 indicates that 10.9% disagreed with the statement, 17.4% were neutral, 30.4% agreed with the statement, and 41.3% strongly agreed with the assertion. Therefore, most of the respondents (up to 71.7%) agreed that the lack of specific accounting standards for HR accounting in Nigeria is the major problem of HR accounting.

The literature also identified the uncertainty about the service period of human resources as a problem of HR accounting. The research questionnaire requested the respondents to identify the degree to which they agree with the assertion about the uncertainty of the service period of human resources as the main problem of HR accounting in Nigeria. Table 33 contains the results of the responses.

Table 33 shows that 41.3% of the respondents disagreed, while 41.3% agreed with the statement that uncertainty about the service period is the main problem of HR accounting in Nigeria. The remaining 17.4% were neutral. The results imply that there are equal percentages of respondents that disagreed and those that agreed with the notion that uncertainty about the service period of human resources.

Table 33: Uncertainty about the service period of HR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	19	41.3	41.3	41.3
	Neutral	8	17.4	17.4	58.7
	Agree	19	41.3	41.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

In Nigeria, the tax laws do not recognise HR as an asset like other financial assets. The questionnaire contained a statement about whether that is the main problem of HR accounting in Nigeria. The respondents indicated their agreement with that statement, and the results are in Table 34 below.

Table 34: Tax laws do not recognise HR as an asset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	7	15.2	15.2	15.2
	Neutral	11	23.9	23.9	39.1
	Agree	28	60.9	60.9	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 34 shows that 15.2% of the respondents disagreed with the notion that the fundamental issue with HR accounting in Nigeria is that the tax laws do not consider human resources as assets; 60.9% agreed that the reluctance of tax laws to accept HR as an asset is the fundamental issue hindering HR accounting, and 23.9% were neutral. Most of the respondents agreed that the main problem of HR accounting in Nigeria was the failure of tax laws to recognise HR as an asset just like other assets.

The absence of a generally accepted method of valuing human resources is one of the main problems identified in many studies. Therefore, the questionnaire contained a statement about whether the absence of a generally accepted method of valuing human resources is the main problem of HR accounting in Nigeria. The respondents indicated their agreement with this statement, and the results are in Table 35.

Table 35: Lack of universally accepted method of valuing HR

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	1	2.2	2.2	2.2
	Neutral	1	2.2	2.2	4.3
	Agree	25	54.3	54.3	58.7
	Strongly Agree	19	41.3	41.3	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 35 above shows that 2.2% disagreed with the statement, and another 2.2% were neutral. Of the remaining respondents, 54.3% agreed, and 41.3% strongly agreed that the lack of a universal method of valuing human resources is the main problem of HR accounting in Nigeria. The results indicate that a significant majority of the respondents (up to 95.6%) considered the lack of an acceptable method of valuing human resources as the main problem of HR accounting in Nigeria.

Another concern is the suspicion of manipulation of HR accounting figures by management. Therefore, a statement in the research questionnaire required the respondents to indicate their agreement with the notion that management may use HR accounting as a means of window dressing financial reports, which is the main problem hindering the adoption of HR accounting in Nigeria. Table 36 presents the responses of the respondents to this issue.

Table 36 shows that 2.2% and 6.5% of the respondents did not consider the possibility of manipulating HR accounting information as the main problem of HR accounting in Nigeria, while 6.5% were neutral. The remaining 76.1% and 6.5% of respondents considered the possibility of management manipulating HR accounting information the main problem of HR accounting. Therefore, a significant majority of the respondents agreed that the fear of possible manipulation of HR accounting information by management is the main problem of HR accounting.

Table 36: Management may use HR accounting to manipulate financial reports

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	1	2.2	2.2	2.2
	Disagree	3	6.5	6.5	8.7
	Neutral	4	8.7	8.7	17.4
	Agree	35	76.1	76.1	93.5
	Strongly Agree	3	6.5	6.5	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Another potential problem of HR accounting in Nigeria is the absence of an audit framework for HR accounting. The research questionnaire requested the participants to show the degree of their agreement with the claim that HR accounting will only be transparent if backed by an audit. The results of their responses are in Table 37.

Table 37: HR accounting will only be transparent if backed by audit

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Neutral	1	2.2	2.2	2.2
	Agree	36	78.3	78.3	80.4
	Strongly Agree	9	19.6	19.6	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 37 above shows that 2.2% of the respondents remained neutral. The remaining 78.3% and 19.6% agreed and strongly agreed, respectively, that an audit framework for HR accounting is a prerequisite for having a transparent HR accounting system. These results indicate that an overwhelming majority of the respondents (97.9%) agreed that an HR accounting audit is necessary to have a transparent HR accounting system. The results implied that 97.9% believed that the lack of a framework for auditing HR accounting information and disclosure is the main problem of HR accounting in Nigeria.

Table 38 shows the results of responses to the statement that attributed the problem of HR accounting to a low level of awareness among stakeholders. This statement is based on the findings of Ibarra and Cosico (2016) that there is generally a low degree of awareness about HR accounting in many developing countries.

Table 38: Low level of awareness about HR accounting among stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	5	10.9	10.9	10.9
	Neutral	1	2.2	2.2	13.0
	Agree	28	60.9	60.9	73.9
	Strongly Agree	12	26.1	26.1	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 38 shows that 10.9% of the respondents strongly disagreed that a low level of awareness among stakeholders is the main problem of HR accounting in Nigeria, while 2.2% were neutral. The remaining 60.9% and 26.1% of the respondents agreed and strongly agreed, respectively, that lack of awareness about HR accounting is the main problem of HR accounting in Nigeria.

Confidentiality of human resources information is another factor that may contribute to the low adoption rate of HR accounting. The respondents showed their agreement with a statement indicating that the confidentiality in which some organisations handle information relating to human resources is the main problem of HR accounting. The results are in Table 39 below.

Table 39: The confidentiality attached to the individual

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disagree	7	15.2	15.2	15.2
	Neutral	11	23.9	23.9	39.1
	Agree	28	60.9	60.9	100.0
	Total	**46**	**100.0**	**100.0**	

Source: Survey data, 2020

Table 39 shows that 15.2% of the respondents disagreed, while 60.9% agreed that the confidentiality of employees' records is the main problem preventing the adoption of HR accounting in Nigeria. The remaining 23.9% were neutral.

4.5 Hypotheses Testing

In this section, section 4.5, the research hypotheses formulated in chapter one are either accepted or rejected based on statistical test results. This section follows the presentation of the data collection in section 4.4. The study used regression analysis as the statistical test for testing hypothesis one and the Kruskal-Wallis test to test hypotheses two, three, and four.

The hypotheses tested are in subsections 4.5.1 to 4.5.4. The sections contain the descriptive statistics relating to the variables and the hypotheses of this study. The descriptive statistics are presented based on each of the hypotheses of this study. Apart from testing the hypotheses, results relevant to the hypotheses from the primary data are also presented to ensure that the research addresses the research questions raised in chapter one and to achieve the aims of the research.

The specific objectives of this study, as stated in chapter one item 1.3, are to investigate the link between HR accounting disclosure and FR quality. Analyse the data from the respondents on the impact of HR accounting disclosure and FR quality. Identify the reasons behind the exclusion of investment in HR from the balance sheet and the main factors militating against the adoption of HR accounting in Nigeria. It will not be out of place to restate the hypotheses of this research as stated in chapter one (1.5.2).

The first hypothesis posits that no statistically substantial positive link exists between HR accounting disclosure and FR quality. The second hypothesis postulates the existence of no significant difference among the groups of accountants on whether HR accounting disclosure improves FR quality. The third hypothesis is a postulation that says there is no significant difference among the groups of accountants on the reasons for the exemption of investment in HR from the balance sheet. Lastly, the fourth hypothesis postulates that there is no significant difference among the three groups of accountants and that the lack of a generally accepted valuation model for HR is the major problem of HR accounting in Nigeria.

The research used secondary data to test the first hypothesis using a regression technique to investigate the link between HR accounting and FR quality. Furthermore, the study used the Kruskal-Wallis test on the primary data to test hypotheses two, three, and four. The adoption of the Kruskal-Wallis test is due to the violation of the parametric criteria required for ANOVA.

4.5.1 Hypothesis one

Hypothesis one is a postulation about the relationship between HR accounting disclosure and FR quality. Using secondary data generated from the 2019 audited accounts and reports of 86 non-financial companies, this research tested this hypothesis by applying regression analysis.

Regression analysis is an advanced form of correlation analysis. It is a parametric test used in determining the extent of the relationship among variables. The simple linear regression analysis determines the association between one manipulated variable and one response variable. In addition to determining the link between variables, linear regression predicts the value of one variable depending on the value of another variable. As highlighted in chapter three, correlation and regression analyses are parametric procedures which assess the relationship among variables. As a parametric procedure, the conditions for running a regression analysis are stringent and should be addressed before proceeding with the test. As a parametric test, there are about six conditions (assumptions) to check before running a regression analysis. While some of these conditions may be violated without serious consequences, others must be satisfied before a valid regression analysis can be conducted successfully (Pallant, 2016; Bhatti, 2005).

Regression analysis assumes that both the dependent and independent variables are measured at the same scale or continuous level. In other words, the variable should be on a ratio interval scale. The dependent variable (FR quality) and the independent variable (HR accounting disclosure) are measured in the form of indices. An index number is a ratio scale. Therefore, the two variables have satisfied the first assumption of conducting a regression analysis.

Another assumption of regression analysis is the assumption of linearity. This suggests the existence of a linear relationship between the regressor and the regressand variable. As can be observed from the scatter plot in Figure 14, there is a positive linear association between FR quality and HR accounting disclosure. This satisfies the second assumption.

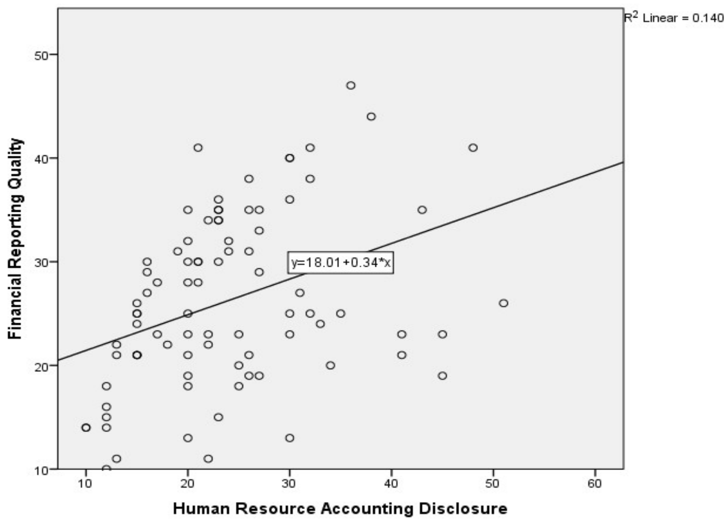

Figure 14: Scatter plot showing the relationship between HR accounting disclosure and FR quality

The absence of significant outliers is another assumption of regression analysis. Again, the scatter plot in Figure 14 shows that there were no significant outliers in the data. This was also indicated by the Standard Residual Minimum and Maximum (Std. Residual Min. =-1.974, Std. Residual Max. = 2.138) as shown in Table 40 for residual statistics. This satisfies the assumption of no significant outliers in the data. The Durbin-Waston test was also used to confirm the independence of residual errors. As shown in Table 43, the Durbin-Waston test shows that the residual errors are independent (d = 1.379).

Table 40: Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	21.45	35.56	26.28	3.117	86
Residual	-15.331	16.605	.000	7.721	86
Std. Predicted Value	-1.549	2.976	.000	1.000	86
Std. Residual	-1.974	2.138	.000	.994	86

a. Dependent Variable: Financial Reporting Quality

The assumption of normality is an important condition for conducting regression analysis. In regression analysis, the data is assumed to be relatively normally distributed. Figure 15 is a histogram with a superimposed normal distribution curve. Figure 15 shows that the data forms a relatively normal distribution.

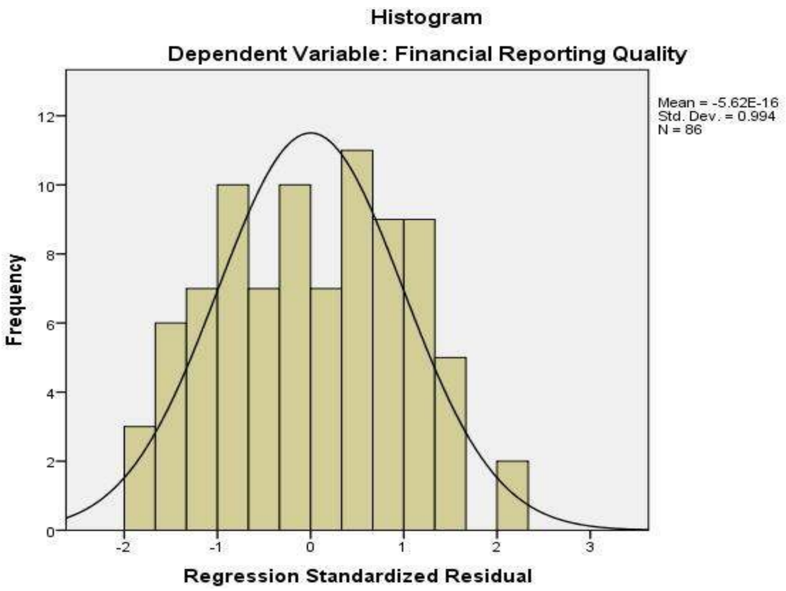

Figure 15: Histogram with a superimposed normal distribution curve

As shown in Table 41, the results of the one-sample Kolmogorov-Smirnov test confirmed that the data are relatively normally distributed (Test Statistics = 0.084; Asymptotic Significance = 0.189).

Table 41: One-Sample Kolmogorov-Smirnov Test

		Financial Reporting Quality
N		86
Normal Parameters[a,b]	Mean	26.28
	Std. Deviation	8.327
Most Extreme Differences	Absolute	.084
	Positive	.084
	Negative	-.056
Test Statistic		.084
Asymp. Sig. (2-tailed)		.189[c]

a. Test distribution is Normal.

b. Calculated from data.

c. Lilliefors Significance Correction.

Another assumption is that the data should show homoscedasticity. That is, the variances along the line of best fit are expected to remain similar as one moves along the line. This can be demonstrated by a normal P-P plot. The normal P-P plot in Figure 16 shows that the residual errors of HR accounting disclosure and FR quality remain similar along the line of best fit, thus indicating the existence of homoscedasticity.

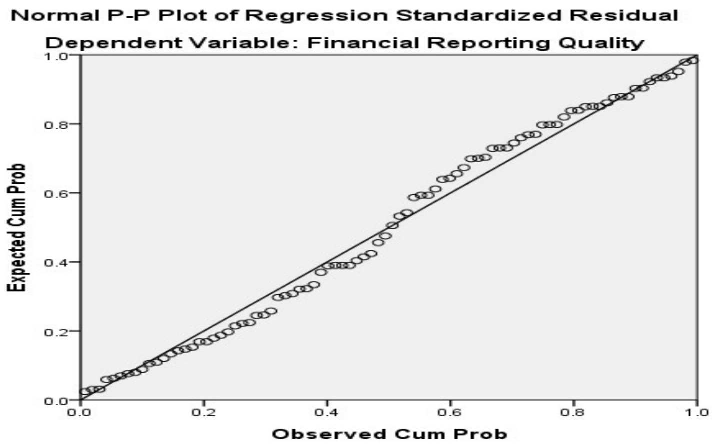

Figure 16: Normal P-P Plot of residual errors: HR accounting disclosure and FR quality

The assumption of the absence of multicollinearity applies only to multiple regressions where there are more than one dependent variable. Therefore, this does not apply to this research because there is only one dependent and one independent variable.

After ensuring that the conditions for using regression techniques were met, regression analysis was carried out to determine the relationship between HR accounting disclosure and FR quality and to investigate whether the level of HR accounting disclosure can help predict the level of FR quality of non-financial companies. The outcome of the regression is presented in the subsequent paragraphs.

A correlation analysis was performed to determine the correlation between the independent variable, HR accounting disclosure, and the dependent variable, FR quality. The outcome of the analysis reveals that HR accounting disclosure is significantly and positively correlated with FR quality. Table 42 shows that there are 86 companies in the sample and that there is a significant positive correlation of.374.

Table 42: Correlations between FR quality and HR Accounting disclosure

		Human Resource Accounting Disclosure	**Financial Reporting Quality**
Human Resource Accounting Disclosure	Pearson Correlation	1	.374**
	Sig. (2-tailed)		.000
	N	86	86
Financial Reporting Quality	Pearson Correlation	.374**	1
	Sig. (2-tailed)	.000	
	N	86	86

**. Correlation is significant at the 0.01 level (2-tailed).

A simple linear regression was performed to analyse the connection between FR quality and HR accounting disclosure. Table 43 shows the model summary of the results of the analysis.

Table 43: Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.374[a]	.140	.130	7.767	1.379

a. Predictors: (Constant), Human Resource Accounting Disclosure

b. Dependent Variable: Financial Reporting Quality

The results in Table 39 show that HR accounting disclosure has a statistically noticeable influence on FR quality. The results show that HR accounting disclosure accounts for 14% of the variability in FR quality, with an adjusted R2 of 13%. This is a relatively weak positive relationship (Cohen, 1988). Table 40 shows the coefficients of the regression. The regression equation for predicting FR quality from HR accounting disclosure is y = 18.01 + 0.34x, where x is FR quality. The confidence level for predicting FR quality from HR accounting disclosure is 95%, with a confidence interval between 13.264 and 22.757, while B = 0.344. Thus, for every one-unit increase in HR accounting disclosure, there is an increase of about 13.26 to 22.76 points in FR quality.

Table 44: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95.0% Confidence Interval for B	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
1	(Constant)	18.011	2.387		7.546	.000	13.264	22.757
	Human Resource Accounting Disclosure	.344	.093	.374	3.700	.000	.159	.529

a. Dependent Variable: Financial Reporting Quality

Therefore, based on the discussion above, the null hypothesis, which implies no significant positive link between HR accounting disclosure and FR quality, is rejected. The alternate hypothesis that predicts a statistically significant positive connection between HR accounting disclosure and FR quality is accepted.

4.5.2 Hypothesis two

As indicated earlier, hypotheses two, three, and four were tested using the Kruskal-Wallis test. As highlighted in chapter three, 3.7.2.2, the Kruskal-Wallis test is the direct nonparametric alternative of ANOVA (Aldrich & Cunningham, 2016). According to Bhatti (2005), the Kruskal-Wallis test is the equivalent of a one-way between-groups ANOVA. This means that the test allows for the examination of the possible differences between two or more groups (George & Mallery, 2019). The Kruskal-Wallis test is applied in data analysis when the population is not normally distributed and does not have equal variance. In general, the Kruskal-Wallis test is very useful where there is a violation of the normality criterion and other requirements of parametric tests (George & Mallery, 2019; Aldrich & Cunningham, 2016).

Although nonparametric tests have less stringent conditions, the criteria for running the Kruskal-Wallis test must be considered before applying the test (Pallant, 2016). Apart from the general requirements of nonparametric tests, which is the violation of the parametric criteria, there are specific requirements for running a Kruskal-Wallis test (Pallant, 2016). One of the requirements is that the sample should be random. Another requirement is that of independence of observation. This means that each of the subjects can be a member of only one group or category (the groups are mutually exclusive) and each observation can only be counted once (Pallant, 2016). Additionally, the data collected from one subject is not capable of influencing the data collected from another. Another criterion of running the Kruskal-Wallis test is that the independent variable must be a categorical (nominal) variable while the dependent variable should be on the scale level (ordinal or ratio). Additionally, the population from which the sample is drawn should have at least three mutually exclusive categories (Ho, 2018; Aldrich & Cunningham, 2016; Pallant, 2016).

The primary data for this research met the requirements for running the Kruskal-Wallis test. Apart from the non-normality of the data, the population was comprised of three independent groups. The respondents were grouped into accounting theoreticians (accountants in academia), accountants in private practice, and accountants in public and private organisations. Apart from being categorical, the groups are mutually exclusive. This satisfies the requirement of having at least three independent samples and the independent variable being categorical. The research employed a five-point Likert scale questionnaire to measure the dependent variable. Generally, the results of the data collected using a Likert scale questionnaire are at least regarded as ordinal (Pallant, 2016; Bhatti, 2005).

The second hypothesis of this study sought to investigate whether HR accounting disclosure contributes to FR quality. To achieve this objective, a series of questions were asked in the questionnaire. This helped to get the required data for testing the hypothesis. Questions numbered one to eight in the second part of the questionnaire (section B) were used to gather the data used in testing hypothesis two. After reverse-correlating question three, the data from these questions were combined to form the dependent variable. The resultant data was tested using the Kruskal-Wallis test. Table 45 gives a summary of the data captured using the eight questions. The data in Table 46 shows that 46 respondents were involved in the research.

Table 45: Responses on whether HR accounting disclosure improves FR quality

Statements	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Standard Deviation
HR are important assets	10.9	0.0	0.0	23.9	65.2	4.33	1.248
The value of HR should be reported in the annual financial reports	0.0	6.5	13.0	30.4	50.0	4.24	0.923
Exclusion of HRV from the financial reports distorts true and fair view	0.0	10.9	17.4	41.3	30.4	3.91	0.962
Providing information on investment in and value of HR is useful for investment decisions	0.0	4.3		41.3	54.3	4.46	0.721
Voluntary disclosure of HRA information in the annual financial reports improves quality of financial reporting	0.0	2.2	10.9	30.4	56.5	4.41	0.777
Monetary value of HR should be recognised in the SFP as asset/investment	0.0	8.7	6.5	60.9	23.9	4.00	0.816
Monetary value of HR of should be presented in the notes to the accounts	2.2	37.0	15.2	45.7	0.0	3.04	0.965
Value of HR should be presented in a separate HRA Statement in the financial reports	0.0	10.9	21.7	52.2	15.2	3.72	0.861

Source: Survey data, 2020

Table 47 shows the test statistics of the data. From the Table, with (forty-six) 46 respondents and 2 degrees of freedom, test statistics was 5.338, and the p-value (Asymptotic Significance) was 0.069. This result is confirmed by the hypothesis test summary in Table 47 below, which indicates that by applying the Kruskal-Wallis test to the data at a 0.05 significance level, the pvalue was greater than 0.05. This implies that there is no statistically significant difference among the three groups of accountants regarding the contribution of HR accounting disclosure towards improving FR quality. As such, the research accepts the null hypothesis, which says that there is no significant difference among accountants that HR accounting disclosure improves the quality of FR.

Table 46: Independent-Samples Kruskal-Wallis Test Summary

Total N	46
Test Statistic	5.338[a,b]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.069

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

Table 47: Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of HRAD improves FRQ is the same across categories of Sectors of employment.	Independent-Samples Kruskal-Wallis Test	.069	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

It is worthwhile to note the responses of the respondents to some specific questions, as summarised in Table 45. According to Table 41, the majority of respondents (89.1%) believe that human resources are an important asset for non-financial reporting entities in Nigeria. The respondents recommended that HR value should be reported in the annual financial reports (80.4%). The respondents equally believed that the exclusion of the HR value from financial reports distorts the “true and fair view” of the reports (71.7%). A greater majority of the respondents believed that providing information relating to HR value is useful for investment decisions (95.6%) and concluded that the voluntary HR accounting disclosure by non-financial reporting entities in Nigeria helps in improving the FR quality of the companies (86.9%).

As reported in the above paragraph, the data from most of the respondents indicted that the HR value should be presented in the audited accounts. Respondents were also asked to specify how HR value should appear in financial reports. About 84.8% of the respondents agreed that HR value should be recognised on the balance sheet. 67.4% of the respondents preferred that HR value be presented in a separate HR accounting statement in the financial reports, while only

45.7% agreed that HR value should be disclosed by way of notes to the accounts. It should be noted that the three questions were not mutually exclusive. The questions allowed each of the respondents to rank how best to present HR value in the audited account reports based on the three options.

4.5.3 Hypothesis three

Hypothesis three postulates that there is no significant difference among accountants regarding the reasons for the exclusion of investment in HR from the statement of financial position. To test hypothesis three, seven questions (questions numbered ten to sixteen) in Section B of the questionnaire were combined to form the dependent variable. As with hypothesis one, all the 46 respondents participated in answering the questions. The data collected for this is presented in Table 48.

Table 48: Responses on the reasons for the exclusion of investment in HR from statement of financial-position

Statements	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Standard Deviation
Lack of a generally accepted valuation method	0.0	6.5	6.5	50.0	37.0	4.17	0.825
HRV is a sensitive organisational data	17.4	39.1	15.2	26.1	2.2	2.57	1.128
Wages and salaries have been treated in the income statement	6.5	58.7	13.0	19.6	2.2	2.52	0.96
There is no active market for human resources	6.5	65.2	15.2	13.0	0.0	2.35	0.795
Recognising of HRV will expose a business to its competitors	0.0	45.7	13.0	41.3	0.0	2.96	0.942
Financial position will be miss leading of HRV is recognised	10.9	78.3	2.2	8.7	0.0	2.09	0.694
Stakeholders are not interested in the monetary value of HR	4.3	56.5	15.2	19.6	4.3	2.63	0.997

Source: Survey data, 2020

Table 49 shows the results of the test statistics for hypothesis three. From Table 50, with 46 respondents and 2 degrees of freedom, the test statistics was 1.676 and the p-value (asymptotic significance) was 0.432.

Table 49: Independent-Samples Kruskal-Wallis Test Summary

Total N	46
Test Statistic	1.676[a,b]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.432

a. The test statistic is adjusted for ties.

b. Multiple comparisons are not performed because the overall test does not show significant differences across samples.

The p-value of.432 in Table 49 for the hypothesis test summary corresponds with that of the test statistics in Table 49. Since at the 0.05 level of significance, the p-value of 0.432 is greater, the null hypothesis is retained. Therefore, this study fails to reject the null hypothesis that there is no statistically significant difference among accountants on the reasons for the exclusion of HR value from the statement of financial position.

Table 50: Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of reasons for exclusion of HRV from SFP is the same across categories of Sectors of employment.	Independent-Samples Kruskal-Wallis Test	.432	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

Further scrutiny of the results reveals that the reasons for not reporting HR value on the balance sheet have different scores as presented in Table 51. Based on the scores of agreements with the statements by the respondents, the lack of a generally accepted valuation model is the first reason for not recognising HR value on the balance sheet (87%). This is followed by the fear of exposing a business to competitors (41.3%). The reason for the exclusion of HR value from the balance sheet with the lowest score is the fear that the financial position will be misleading if HR value is recognised on the balance sheet (8.7%).

Table 51: Ranking of the reasons for the exclusion of investment in HR from SFP

Statements	Score %	Mean	Rank
Lack of a generally accepted valuation method	87.0	4.17	1
Recognising of HRV will expose a business to its competitors	41.3	2.96	2
HRV is a sensitive organisational data	28.3	2.57	3
Stakeholders are not interested in the monetary value of HR	23.9	2.63	4
wages and salaries have been treated in the income statement	21.8	2.52	5
There is no active market for human resources	13.0	2.35	6
Financial position will be miss leading if HRV is recognised	8.7	2.09	7

Source: Survey data, 2020

4.5.4 Hypothesis four

The fourth hypothesis of this research postulates that there is no significant difference among accountants on whether the lack of a generally accepted valuation model for HR is the major problem of HR accounting in Nigeria. To test hypothesis four, questions numbers 17 to 24 in section B of the questionnaire were used. A summary of the data gathered relating to these questions is in Table 52.

Table 52: Responses on whether the lack of a generally accepted valuation model for HR is the major problem of HR accounting in Nigeria

Statements	Strongly disagree %	Disagree %	Neutral %	Agree %	Strongly agree %	Mean	Standard Deviation
Absence of specific accounting standards	0.0	10.9	17.4	30.4	41.3	4.02	1.022
Uncertainty about the service period of HR	0.0	41.3	17.4	41.3	0.0	3	0.919
Tax laws do not recognise HR as an asset	0.0	15.2	23.9	60.9	0.0	3.46	0.751
Lack of universally accepted method of valuing HR	0.0	2.2	2.2	54.3	41.3	4.35	0.64
Management may use HRA to manipulate financial reports	2.2	6.5	8.7	76.1	6.5	3.78	0.758
HRA must be backed by a HR audit	0.0	0.0	2.2	78.3	19.6	4.17	0.437
Low level of awareness about HRA	10.9	2.2	60.9	26.1	0.0	3.91	1.132
Confidentiality attached to employees' records	0.0	37.0	13.0	50.0	0.0	3.13	0.934

Source: Survey data, 2020

Table 53 shows the outcome of the hypothesis testing. The results show that the value of the test statistics was 7.741 with 2 degrees of freedom and 46 participants. The p-value (asymptotic significance) was 0.21, indicating that the result was not statistically significant.

Table 53: Independent-Samples Kruskal-Wallis Test Summary

Total N	46
Test Statistic	7.741[a]
Degree Of Freedom	2
Asymptotic Sig.(2-sided test)	.021

a. The test statistic is adjusted for ties.

Table 54 below shows a summary of the hypothesis testing. The result confirms the results shown in Table 53 above. With a p-value of less than 0.05, the null hypothesis that envisaged no statistically significant difference among accountants on whether the lack of an acceptable valuation model for human resources is the major problem of HR accounting in Nigeria is rejected.

Table 54: Hypothesis Four Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The distribution of lack of acceptable model for valuing HR is the same across categories of sectors of employment.	Independent-Samples Kruskal-Wallis Test	.021	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .050.

The rejection of the null hypothesis means that not all three groups of accountants considered the lack of an acceptable model for valuing human resources as the major problem of HR accounting in Nigeria. Therefore, there was a need to investigate further to examine which group or groups differed regarding this issue. A post-hoc test was conducted on the data to achieve this. As Pallant (2016) recommended, each of the three groups of accountants was compared with another to determine if there was a statistically significant difference between them. These comparisons were made using the Mann-Whitney U Test. Table 55 and its corresponding test statistics table show a comparison between the responses of the group of accountants in academic and those of the group of accountants in private practice. The results from the test show no statistically noticeable difference in the responses of the two groups (pvalue =.066 and a Z score of -1.839).

Table 55: Test statistics of comparison between accounting

	Lack of acceptable model for valuing HR
Mann-Whitney U	23.000
Wilcoxon W	68.000
Z	-1.839
Asymp. Sig. (2-tailed)	.066
Exact Sig. [2*(1-tailed Sig.)]	.079[b]

a. Grouping Variable: Sectors of employment

b. Not corrected for ties.

A comparison of the group of accountants in private practice and the group of accountants in public and private organisations also reveals the existence of no statistical difference in their responses (p-value of 0.221 and a Z score of -1.225), as shown in Table 56.

Table 56: Test Statistics of comparison between accountants in

	Lack of acceptable model for valuing HR
Mann-Whitney U	88.500
Wilcoxon W	466.500
Z	-1.225
Asymp. Sig. (2-tailed)	.221
Exact Sig. [2*(1-tailed Sig.)]	.233[b]

a. Grouping Variable: Sectors of employment

b. Not corrected for ties.

In the two comparisons above, p-values were greater than 0.05, signifying the existence of no statistically noticeable difference between the groups. Consequently, the results of the comparison between the scores of accounting theoreticians (academics) and accountants in public and private organisations reveal the existence of a considerable difference between the two groups (p-value of 0.010 and a Z score of 0-2.57) as contained in Table 57 below.

Table 57: Test statistics of comparison between accounting

	Lack of acceptable model for valuing HR
Mann-Whitney U	61.000
Wilcoxon W	439.000
Z	-2.573
Asymp. Sig. (2-tailed)	.010
Exact Sig. [2*(1-tailed Sig.)]	.010[b]

a. Grouping Variable: Sectors of employment

b. Not corrected for ties.

To confirm the above results and to safeguard against committing a type I error in determining which groups are different, Bonferroni adjustment was introduced to the alpha values, and pairwise comparison was carried out using the revised alpha level. Bonferroni adjustment requires dividing the alpha value of 0.05 by the number of the tests undertaken (three). The revised alpha level was used as the condition for assessing significance in the pairwise comparison. Table 58 shows the results of the pairwise comparison of the three groups after the introduction of the Bonferroni adjustment. The results show the existence of no statistically noticeable difference between the group of accountants in public and private organisations and that of accountants in private practice (Sig. = 0.309, Adjusted Sig. = 0.928). Likewise, the comparison between the group of accountants in private practice and accounting theoreticians (academics) did not show a significant difference between the groups (Sig. = 0.169, Adjusted Sig. = 0.506). By contrast, the comparison between the group of accountants in public and private organisations and that of accounting theoreticians (academics) shows that there was a statistically significant difference between the two groups (Sig. = 0.006, Adjusted Sig. = 0.017). These results agreed with the results of the comparison of the groups using the MannWhitney test reported earlier.

Table 58: Pairwise Comparisons of groups of accountants by sectors of employment

Sample 1-Sample 2	Test Statistic	Std. Error	Std. Test Statistic	Sig.	Adj. Sig.
Accountants in public/private organisations-Accountants in private practice (audit, consultancy, etc)	5.185	5.100	1.017	.309	.928
Accountants in public/private organisations-Accounting Theoreticians (academics)	13.563	4.905	2.765	.006	.017
Accountants in private practice (audit, consultancy, etc)-Accounting Theoreticians (academics)	8.378	6.088	1.376	.169	.506

Each row tests the null hypothesis that the Sample 1 and Sample 2 distributions are the same.
Asymptotic significances (2-sided tests) are displayed. The significance level is .05.

The list of challenges or problems with HR accounting in Table 48 was ranked and re-presented in Table 59. The ranking shows that the lack of a universally accepted method of valuing HR (with a score of 95.6% and a mean of 4.35) and the need to institute a stringent human resource audit (with a score of 97.9% and a mean of 4.17) are the major challenges of HR accounting in Nigeria. Uncertainty about the service period of employees (41.3%) and a low level of awareness (26.1%) was considered less problematic concerning the implementation of HR accounting.

Table 59: Ranking of the major problems of HR accounting in Nigeria

Statements	Score %	Mean	Rank
HRA must be backed by an HR audit	97.9	4.17	1
Lack of universally accepted method of valuing HR	95.6	4.35	2
Management may use HRA to manipulate financial reports	82.6	3.78	3
Absence of specific accounting standards	71.7	4.02	4
Tax laws do not recognise HR as an asset	60.9	3.46	5
Confidentiality attached to employees' records	50	3.13	6
Uncertainty about the service period of HR	41.3	3	7
Low level of awareness about HRA	26.1	3.91	8

Source: Survey data, 2020

4.5 Evaluation of Findings

The main reason for conducting this research is to analyse the impact of HR accounting on FR by examining the relationship between HR accounting disclosure and FR quality. The study also sought to ascertain the reasons for the omission of HR value from the balance sheet and to identify the main problems and challenges of implementing HR accounting in Nigeria. To achieve the objective, the research utilised data from the 2019 audited accounts of non-financial companies quoted on the floor of the NSE to run a regression analysis between HR accounting disclosure and FR quality. The study findings suggest a substantial positive link between the two variables. The research also collected primary data (using a Likert scale questionnaire) from three groups of professional accountants to analyse the possible contributions of HR accounting disclosure toward improving FR quality. The research also analysed the reasons for not recognising HR value in the balance sheet and the problems and challenges of HR accounting in Nigeria based on the data from the accountants. The research used the KruskalWallis test to see whether there were any significant disparities in the responses of the participants to these problems. The analytical findings show no statistically significant difference across the three groups of accountants on the belief that HR accounting disclosure improves FR quality. The results also reveal no statistically significant disparity across the three groups of accountants on the reasons behind the exclusion of HR value from the balance sheet. Further analysis of the primary data shows a statistically significant disparity among the groups of accountants on what constitutes the main challenges to HR accounting. These results and other findings from this research are evaluated in connection with the outcomes and positions of existing literature in the subsequent paragraphs.

As previously indicated, one of the primary goals of this work was to investigate the association between HR accounting disclosure and FR quality. The results of data analysis revealed a positive correlation between HR accounting disclosure and FR quality with $R = 0.37$. The positive correlation implies that the variables move in the same direction. In other words, the better the HR accounting disclosure of a reporting entity, the better its FR quality and vice versa. The results of the regression analysis show that the increase in FR quality as a result of an increase in HR accounting disclosure can be up to 14% (R2 = 14%, Adj R2 = 13%).

The above findings confirm the assertions made by Kirfi and Abdullahi (2012) that HR accounting can enhance and improving FR quality in Nigeria. In a recent study, Odunayo and Festus (2020) also found a positive connection between HR accounting and FR quality in a study involving listed oil companies in Nigeria. The findings of this research corroborate the findings of Odunayo and Festus (2020). The findings of this study also agree with the findings of Ijeoma and Aronu (2013), who found that HR accounting improves the financial position of banks. The findings are also in line with the conclusion of Akintoye et al. (2018) that HR accounting would help in stopping the unethical practices bedevilling FR and improve the reliability of FR. The results further support the recommendation made by Babajide (2013), who urged reporting entities to consider recognising the value of their HR in their financial statements because it would enhance the credibility of the FR. Furthermore, the findings support the position of Asein et al. (2019), who concluded that HR accounting eliminates hidden values from the financial reports, thereby improving FR quality.

It is worthwhile to note the results of testing hypothesis two. Hypothesis two sought to find out, using the responses from professional accountants, whether HR accounting disclosure improves FR quality. The results show HR accounting disclosure improves FR quality. This result buttressed the results of testing hypothesis one. In other words, both the primary and secondary data indicate that HR accounting disclosure improves FR quality.

On the other hand, the results of the testing hypothesis one contradict the assertion by Yinghong (2006) that HR accounting information did not meet the quality requirements of relevance and reliability as the basic fundamental qualitative characteristics of FR. As such, Ying-hong (2006) recommended that HR accounting information should only be disclosed in the notes to the accounts and not in any of the main statements.

The results of this research further highlight the lingering problem in accounting. It also indicates the existence of a gap between theory and practice. Despite the overwhelming empirical evidence showing that HR accounting disclosure significantly improves FR quality, little has been done to mandate firms to adopt HR accounting practices in Nigeria. Adopting HR accounting and HR accounting disclosure continues to be at the discretion of the firms. This fact was reported in other countries, like the Philippines (Ibarra & Cosico, 2016). This indicates that the trend is not limited to Nigeria.

The results from this research also show that HR accounting disclosure improves FR quality. As discussed above, this confirms the results from the secondary data analysis. It also agreed with the outcomes and assertions of many existing studies, including Asein et al. (2019), Akintoye et al. (2018), Ijeoma, and Aronu (2013), among others. On the other hand, the results contradicted the assertion made by Ying-hong (2006).

Financial reporting eliminates uncertainty and facilitates investment decisions (Odunayo & Festus, 2020). IASB (2018), specifically, explains that the main aim of FR is “to provide financial information that is useful to users in making decisions relating to providing resources to the entity” (p. 5). Data obtained from the three groups of accountants shows that HR accounting disclosure facilitates investment decisions. The finding is in line with the findings of Olayiwola (2016), who observed that the costs of HC have a significant positive connection with share prices. The results from this study also affirmed the findings of Shreelatha et al. (2018), who found that the inclusion of HR accounting disclosure information in financial statements influences investment decisions. Other studies that reported similar results include

Omole et al. (2017), Ijeoma et al. (2013), and Micah et al. (2012). This finding also corroborates the finding of Qatawneh (2013), who concluded that HR accounting information improves the reliability of accounting information systems of Jordanian companies.

Another interesting finding here is that, with a score of 80.4% and a mean of 4.24 (as presented in Table 45), the respondents believed that HR value should be reported in the financial reports. The respondents also indicated how they preferred HR value to be reported in the financial reports. Most of the responses favour reporting HR value on the balance sheet (a score of 84.8% and a mean of 4.00) as against disclosing it in a separate HR accounting statement (a score of 67.4% and a mean of 3.72) and disclosing it in the notes to the accounts (a score of 45.7% and a mean of 3.04). These findings corroborated the findings and recommendations of many prior studies, among which are Bonsu et al. (2019), Asein et al. (2019), Davies (2018), Oko (2018), Olayiwola (2016), Onyekwelu et al. (2015), and Abubakar (2011). Findings and recommendations from all these studies emphasised the need for capitalising and recognising the value of HR on the balance sheet against the current conventional accounting practices.
However, the findings of this research contradict the postulations made by Stanko et al. (2014), Petkov (2010), and Ying-hong (2006). Stanko et al. (2014) postulated that given the lapses in the valuation models for human resources, HR value should not be used for FR. Stanko et al. (2014) further recommended the inclusion of HR accounting reporting in sustainability reporting. Petkov (2010) argues that “a disclosure-only approach provides a better means of incorporating human capital information into the financial statements” (p. 29). As such, Petkov (2010) recommended disclosing HR value in the notes to the financial statements. Ying-hong (2006) opined that HR accounting information did not meet the quality requirements of relevance and reliability of accounting information and, as such, HR accounting information should only be disclosed by way of notes to the accounts.

One of the objectives of HR accounting is the recognition of HR value on the balance sheet (Arkan, 2016). This practice of recognising the value of HR as an asset on the balance sheet is a major distinction between HR accounting and conventional accounting. Under the conventional accounting system, HR value is not reported on the balance sheet (Olayiwola, 2016; Arkan, 2016; Hossain, 2015). Hypothesis three of this study is about the main reasons behind the exclusion of HR values from the balance sheet. Results from the data analysis implied that there was no significant difference among accountants on the reasons for the exclusion of HR value from the balance sheets of reporting entities.

Further analysis of the rationales for excluding the HR value from the balance sheet under the conventional accounting system shows that many of the professional accountants that took part in this research were of the view that the lack of a generally accepted method of valuing HR is the main reason for excluding HR value from the balance sheet. This has the highest score of 87% and an average score of 4.17, as reflected in Table 51. The results also show that the second reason for not reporting HR value from the balance sheet is the fear of exposing entities to their competitors. The third reason for the exclusion of HR value from the balance sheet is that the value of HR is so sensitive that organisations would not want to recognise it on the balance sheet. The fourth reason is that stakeholders are not interested in knowing the monetary value of human resources. The fifth reason is that salaries and wages, which are the rewards for labour, have been treated in the income statement; therefore, HR value need not be recognised in the balance sheet. The absence of an active market for human resources was ranked the sixth reason for excluding HR value from the balance sheet. Lastly, the possibility of the financial reports being misleading because of the recognition of HR value was ranked the lowest. This means that the respondents believed that recognising HR value in the balance sheet would not make the FR misleading.

Some of the above findings correspond with what Bonsu et al. (2019) found. In a study involving 120 professional accountants in Ghana, Bonsu et al. (2019) found that the main reason for excluding HR value from the balance sheet is the absence of an “appropriate model of measurement of human resources” (p. 10). This is also in line with the postulation of Arkan (2016) and the findings of Abubakar (2011), who observed that “the existing models of measuring human resources in monetary terms are surrounded by many weaknesses” (p. 119). This finding also corroborates the observations made by Stanko et al. (2014). Regarding the method of valuation of human resources, Stanko et al. (2014) observed that “no current method is accurate enough to be used as a standard for financial reporting” (p. 103). Based on this, Stanko et al. (2014) recommended the development of a “more inclusive method” for valuing human resources (p. 103). Other researchers with whom this finding corroborates include Ojokuku and Oladejo (2017), who noted that the overwhelming challenge of HR accounting is the lack of a unified approach to reporting the contribution of human resources as a result of the valuation problem. On their part, Rekha and Pavithra (2019) recommended the development of a valuation model for HR.

Hypothesis four of this research is about the main problem of HR accounting in Nigeria. The results of the hypothesis testing show a significant difference among accountants on whether the lack of an acceptable model of valuation for human resources is the major problem of HR accounting in Nigeria. Further analysis of the results reveals a significant disparity between the group of accounting theoreticians (academics) and those of accountants in public and private organisations. Additional analysis revealed that although the two groups had different responses, the lack of a universally accepted method of valuing human resources and the need to institute an HR accounting audit are the main challenges of HR accounting in Nigeria. Other challenges identified by the respondents in order of importance are the fear of manipulation of financial reports by management using HR accounting, the absence of specific accounting standards on HR accounting, and the non-recognition of human resources as assets by tax laws. Others are the confidentiality attached to the records of the employees; uncertainty about the service period of human resources; and lastly, the low level of awareness about HR accounting among stakeholders.

Many existing studies on HR accounting have identified the lack of a generally accepted method of human resource valuation as the main challenge in HR accounting, and many studies have recommended the development of a robust and acceptable framework for valuing human resources. Studies like Flamholtz et al. (2020), Bonsu et al. (2019), Inua (2018), Monday (2017), Onyekwelu et al. (2015), and Stanko et al. (2014) are some of such works that reflect on problems and challenges in HR accounting. Contrasting the ranking of the problems of HR accounting in this research with that in Bonsu et al. (2019) shows that the first three important problems of HR accounting in Nigeria are the lack of a generally accepted valuation method for human resources, the need for an HR accounting audit, and the possibility of manipulation of financial reports by management. On the other hand, Bonsu et al. (2019) found that the top problems with HR accounting in Ghana include: the lack of a universal method of valuing human resources; lack of accounting standards for HR accounting; uncertainty surrounding the service period of human resources; and non-recognition of human resources as an asset by tax laws. The need for HR accounting audit was ranked seventh in Bonsu et al. (2019), against the third position it occupied in this research.

The fourth problem of HR accounting identified in this research is the absence of specific accounting standards. This result is against the ranking of Bonsu et al. (2019), who ranked it first. Many studies in HR accounting have identified or recommended the development and issuance of specific accounting standards in HR accounting. Some of such studies include Odunayo and Festus (2020), Rekha and Pavithra (2019), Akintoye et al. (2018), Monday (2017), Arkan (2016), and Onyekwelu et al. (2015). The conclusion on the need for specific accounting standards for HR accounting contradicts Petkov's (2010) conclusion that the existing IAS were adequate to accommodate HR accounting practice.

4.6 Summary of the Chapter

Chapter four is an essential part of a quantitative research dissertation. The chapter contains data presentation and analysis. It is the analysis of data that makes it possible to have findings and answer the research questions. Without data analysis, it will be difficult to know the actual state of the subject of investigation.

In this dissertation, chapter four has three main parts. The first two parts contain discussions about the trustworthiness (reliability and validity) of the data used in this research. The third section is for data presentation, analysis, and results.

In quantitative research, the words “reliability” and “validity” are the substitutes for the term “trustworthiness”. Reliability and validity of data are the tests used in quantitative research to establish the trustworthiness of data (Ibiamke & Ajekwe, 2017). In general, the more accurate and reliable the data and analytical tools used, the more reliable and valid the findings become.

Data reliability is the consistency of the data measurement instrument (Drost, 2004). Cronbach's Alpha test indicates that the research tool (questionnaire) was reliable.

Validity is the capacity of a research tool to measure what it purports to measure. (Saunders et al., 2016). The questionnaire used in this research underwent rigorous tests to check its validity. These checks included a construct validity check and a content validity check. A pilot test of the research questionnaire proved that the instrument was valid and reliable as part of the rigours.

The data presentation started with the results of data collected from the research respondents regarding their backgrounds. The data presented in this chapter was in tables, graphs, and figures. The data presentation started with the respondents' background information. The results show that forty-six (46) respondents took part in the research. Forty respondents were male, while six (6) respondents were female. Of the forty-six (46) accountants who responded, forty (40) were ANAN members, while the remaining six (6) were ICAN members. In terms of employment, ten (10) respondents were academicians, nine (9) were accountants in private practice, and the remaining twenty-seven (27) were accountants in public and private organisations. The respondents' years of work experience ranged between two (2) and thirtysix (36) years of work experience.

The result of the test of hypothesis one using regression analysis shows that r = 0.37. The result shows a significant correlation between HR accounting disclosure and FR quality. The results further show that HR accounting disclosure accounted for up to 13% of FR quality. The test of hypothesis two using Kruskal-Wallis showed no significant difference among the accountants that HR accounting disclosure improved FR quality. The Kruskal-Wallis test of hypothesis three shows no significant difference among the accountants on the reasons for excluding HR value from the balance sheets of reporting entities. The Kruskal-Wallis test of hypothesis four indicates that accountants differ on the main problem of HR accounting in Nigeria.

In this chapter, an evaluation of the findings followed the data presentation. The evaluation of findings briefly discussed the meaning of the results of the data analysis of the research. The section on the evaluation of findings followed the order of arrangement of the hypotheses of the study. The last part of chapter four is the summary. The summary of the chapter summarises the key points presented in the chapter. This chapter formed the basis of the discussion in the next chapter, Chapter Five.

Chapter 5: Implications, Recommendations and Conclusion

5.0 Introduction

This chapter is the last in this five-chapter thesis. Chapter one of the dissertation contains details about the problem that prompted this research. Recent developments in the global economy have highlighted the value of human resources (Aminu et al., 2022; Arkan, 2016). Economies around the globe have transformed from manufacturing to knowledge-based, where the importance of having the right workforce is crucial in achieving a competitive advantage (Baghadam et al., 2020; Monday, 2017; Huang et al., 2013).

HR accounting is a new concept that seeks to modify the traditional accounting view of human resources (Dey & Sarkar, 2015; Okpala & Chidi, 2010). HR accounting sees human resources as assets that every organisation should recognise on its balance sheet (Oko, 2018; Ezeagba, 2014). HR accounting researchers argue that accounting should devise a means of attributing money value to human resources and should treat the cost of training and development as an investment rather than an expense (Odunayo & Festus, 2020; Janshanlo et al., 2019; Akintoye et al., 2018). These researchers advocate that the value of HR and the cost of investments in HR should form part of the assets on the balance sheet (Flamholtz et al., 2020; Akintoye et al., 2018; Onyekwelu et al., 2015). To ensure smooth adoption and implementation of HR accounting, advocates of the concept called for developing a robust human resources valuation model and issuance of accounting standards on HR accounting (Arkan, 2016).

Some authors on HR accounting have a contrary view to the recommendation mentioned above. These authors contend that no acceptable model of valuing human resources exists (Monday, 2017; Islam & Sarker, 2016; Ogenyi & Oladele, 2015). The authors further argue that HR accounting disclosure does not improve the fundamental qualitative characteristics of

FR (Ying-hong, 2006). Their stance is based on some arguments. The authors contend that HR accounting information should only be disclosed as notes to the accounts. The writers believe that the value of human resources should not be recognised as an asset on the balance sheet (Petkov, 2010; Ying-hong, 2006).

The opposing views highlighted above, and the problems of HR accounting, are important issues that deserve investigation. As opined by Arkan (2016), there is a need for further empirical research on the concept of HR accounting. It is on the backdrop of this that this research investigated the link between HR accounting disclosure and FR quality. The research also explored the influence of HR accounting disclosure on FR quality, the reasons for not recognising HR values in the balance sheet and the main problems of HR accounting in Nigeria.

Chapter five is the last chapter of this thesis. The chapter discusses the implications of the findings considering the limitations of the study. The chapter also discusses two sets of recommendations. The first set of recommendations is for application in practice, while the second set is for future research. The last section of the chapter is the conclusion of the thesis.

The recommendations for application will facilitate reforms and improvements in the current accounting practices. This research recommended the adoption of HR accounting to improve the FR quality. The study also recommends the standardisation of HR accounting. The research also called for the harmonisation of valuation models. Further to this, the research recommended that the government should amend regulatory laws that govern accounting and financial reporting to accommodate the concept of HR accounting. The research also suggested that professional accounting bodies should create awareness among their members and stakeholders. Lastly, the research called for the inclusion of HR accounting in the curriculum of higher institutions in Nigeria.

The recommendations for future research show areas that require further inventions. This research recommended the expansion of the population of the research and replicating the research on other populations and by using longitudinal approach. The research also recommended the use of different statistical tools for data analysis. Lastly, the research encourages future research to examine the possibility of harmonising the different valuations models developed in prior research.

5.1 Implications

Section 5.1 provides a brief overview of the research, its limitations, and the implications of the findings with regard to practice, policy, theory, methodology, and prior and future research.

5.1.1 Summary of the study

The goal of this empirical investigation was to: 1) identify the nexus between HR accounting disclosure and the FR quality of non-financial companies in Nigeria; 2) identify the reason for excluding the value of HR from the balance sheets of reporting entities; and 3) highlight the main problems confronting HR accounting in Nigeria. The study used secondary data from the 2019 financial reports of 86 listed non-financial companies in Nigeria and primary data obtained from 46 professional accountants. The accountants were stratified into three categories: accountants in academia; accountants in public or private sectors; and accountants in practice. The study used an online questionnaire and a structured tool for primary and secondary data collection, respectively.

The study measured HR accounting disclosure using Syed's disclosure index and measured FR quality by operationalising the qualitative feature of FR (Beest et al., 2009). The study applied regression analysis to determine the connection between the two variables. The Kruskal-Wallis test was also applied to determine the differences among the three groups of accountants regarding whether HR accounting disclosure contributes to improvement in FR, the reason for excluding investment in HR from the balance sheet, and the main problem confronting HR accounting in Nigeria.

Findings from the analysis of the secondary data show that HR accounting has a positive effect on the FR quality of non-financial companies. The finding was corroborated by the analysis of primary data from the accountants relating to hypothesis one, which revealed that HR accounting disclosure improves FR quality. The findings also revealed that the three groups of respondents do not agree on a specific reason for excluding the value of HR from the balance sheet. However, further analysis revealed that the lack of a generally accepted valuation model is the first reason for not recognising HR value on the balance sheet. The study further revealed that the lack of a universal framework for auditing HR accounting information is the main problem of HRA accounting in Nigeria.

5.1.2 Limitations

Before discussing the implications of this study, it would be imperative to consider the important limitations of the study. Ratti (2012) rightly pointed out that every research has its limitations, no matter how rigorous it is. Therefore, like many previous scientific studies, this research has its limitations.

One of the limitations of this research is the population. The population for the primary data collection is professional accountants in Nigeria who are members of ANAN and ICAN. Therefore, the population does not include other accountants who are not members of the professional associations and other primary stakeholders in FR. However, considering the heterogeneous nature of the country, studying such a large population may not be feasible.

The second limitation is the use of unweighted and dichotomous index. The Syed index, the most widely used index (if not the only available index) for determining HR accounting disclosure, has some limitations (Aminu, 2022). The index is dichotomous. It only measures the presence or absence of disclosure items but does not consider the extent to which a reporting entity discloses an item and does not take into account the quality of the disclosure (Aminu, 2022). The index assumes that all the disclosure items are of equal importance (Sarkar et al., 2016; Khodabakhshi, 2015).

The third limitation is the use of simple linear regression. The research used simple linear regression to ascertain the relationship between HR accounting disclosure and FR quality. In doing this, the study treated HR accounting disclosure as the only variable influencing FR quality. However, some investigations into the link between corporate governance and FR quality reported a positive correlation between some of the attributes of corporate governance and FR quality. Some of these studies include Ballas et al. (2019), Nikbakht and Khanbeigi (2018), and Onuorah and Imene (2016). Therefore, introducing more variables into the regression equation in the form of moderating or intervening variables is likely to produce more robust results.

Lastly, a lack of prior research on the linkage between HR accounting disclosure and the qualitative characteristics of FR has limited the scope of the review of prior studies. Because of this limitation, the researcher had to rely on related prior studies to make some judgements and measure some variables.

5.1.3 Practical Implications

The following are the implications of the findings of this study on the practise of accounting and financial reporting in Nigeria.

The first practical implication of the findings from this research is that non-financial companies in Nigeria can improve the quality of their FR by enhancing the quality of their HR accounting disclosure. Both primary and secondary data revealed that HR accounting disclosure improves FR quality. The results of the regression analysis (R2 of 0.14 and an adjusted R2 of 0.13) show that the HR accounting disclosure contributes towards improving FR quality by up to 13%. By implication, an improvement of one unit in the HR accounting disclosure of a non-financial company in Nigeria will result in an improvement in the quality of its FR quality by up to 13%. This result has addressed the first problem of this study and met the first purpose of the research. This result fits very well into the context of the conceptual framework of the study.

The results of the primary data analysis support the results of the regression analysis. The results of testing hypothesis two show that regardless of the sector of employment of the accountants, they believed that HR accounting disclosure improves FR quality. This result implies that accountants believed that improvements in the disclosure of HR accounting information could lead to an improvement in FR quality and improved decision-making. This finding corresponds with the assumption of the conceptual framework of this study.

The conceptual framework of the study envisaged a favourable association between HR accounting disclosure and FR quality, which in turn improves decision-making. The development of the conceptual framework of the study followed a careful evaluation of research findings from prior studies. Thus, this result confirms the conceptual framework's assumptions. The result further established the significance of this research in providing data for policy formulation on HR accounting. The research is also a positive contribution to the existing literature on HR accounting in general and the link between HR accounting and FR quality because it is one of the few studies that related HR accounting disclosure to FR quality using qualitative characteristics of FR. The research will hopefully kindle the interest of both researchers in the field of HR accounting and practitioners.

The second practical implication is that the findings from this study suggest that adopting HR accounting should be supported with a robust audit framework to prevent manipulation and misrepresentation of accounting information. The findings from the testing of hypothesis four, which addressed research question number four on whether the lack of a widely agreed upon valuation model for HR is the major problem of HR accounting in Nigeria, provides evidence to support the need for an auditing framework for HR accounting. Additional analysis of the results gave an interesting finding. Contrary to the expectation that the results would show that the lack of a valuation model was the major problem of HR accounting in Nigeria, the results show that the need to institute an HR accounting audit is the major concern of the respondents. The score of the respondents who agreed that there is a need for an HR accounting audit stood at 97.9% (78.3% agreed and 19.6% strongly agreed). This is against the score of the lack of a generally accepted valuation model, which stood at 95.6% (54.3% agreed and 41.3% strongly agreed).

One wonders why the need for an HR accounting audit got the highest score considering the number of prior studies that prioritised the need for an acceptable model of valuation. Some of the studies that prioritised the need for the development of the HR accounting valuation model include Bonsu et al. (2019), Arkan (2016), Onyekwelu et al. (2015), and Stanko et al. (2014). This result was not expected based on the positions of prior studies. The possible reason for this unexpected outcome may have to do with the way things are done in Nigeria. That is to say, without an HR accounting audit, the respondents were not sure whether HR accounting disclosure would be made transparently and objectively.

Looking at the current accounting practices, one can identify some concepts with alternative ways of computation. The computation of the depreciation of non-current assets and stock (inventory) valuation all have alternative methods. For example, IAS 2 provides for the use of either the "first-in, first-out (FIFO)" method, the "weighted average" method, or the "specific identification" method in the valuation of inventory (Pwc, 2019, p. 35; Koppeschaar et al., 2019, p. 56; Bragg, 2018). Additionally, there are multiple methods of computing the depreciation of a non-current asset. The straight-line method, the diminishing balance method, and the units of production method are the techniques for computing depreciation recommended by IFRS (Koppeschaar et al., 2019). Based on this, the IASB can equally select two or three methods of valuing human resources and recommend them for use in determining the value of human resources.

The third practical implication of the findings accounting standard on HR accounting is a veritable tool for promoting the adoption of HR accounting, which will lead to better disclosure practice among non-financial companies. The respondents have indicated that the lack of accounting standards on HR accounting is one of the reasons for excluding HR value from the balance sheet and one of the main problems of HR accounting in Nigeria.

The implication of the results is that both internal and external auditors have to develop proper internal audit programmes that can deter management from using HR accounting information for window-dressing and manipulating FR and to build the confidence of users of accounting information.

5.1.4 Theoretical Implications

The study showed a gap between practice and theory in accounting and financial reporting. It shows that conventional accounting falls short of the expectations of the stakeholder theory by not providing the stakeholders with the HR accounting information they expect. The shortfall is observed in the low level of HR accounting disclosure and the exclusion of the value of HR from the balance sheet.

The study also implies that conventional accounting is yet to accommodate the postulations of human capital and RBV theories. Accounting is yet to recognise HR as the most important asset of reporting entities suitable for recognition on the balance sheet.

5.1.5 Methodological Implications

Although the methodology adopted in this study is not new in accounting research, this research has shown that the qualitative features of accounting information can be used to measure FR quality and subsequently assess the contribution of HR accounting disclosure. The fact that the qualitative features measure both financial and non-financial information is an indication that the results would be more encompassing.

The research also highlights the importance of bringing in stakeholders in determining research involving the determination of FR quality. This is a departure from what is available in the existing studies. Most prior studies on FR used only secondary data without recourse to either the preparers or users of the reports. Furthermore, the study identifies the deficiencies and the need to improve the Syed HR accounting disclosure index.

5.1.6 Relation with prior studies

Existing literature shows that previous studies did not sufficiently study the relationship between HR accounting and FR quality. Studies that use data from accountants on the topic are also scarce. Odunayo and Festus (2020) and Abubakar (2011) are among the few prior studies that investigated the nexus between HR accounting and FR quality in Nigeria. The study by Odunayo and Festus (2020) is an ex-post facto research that concentrates on the oil and gas industry of the Nigerian economy. Like many studies, Odunayo and Festus (2020) used indirect measures of FR quality. However, the research found that HR accounting significantly influences FR quality. Abubakar (2011) investigated whether HR expenditure is suitable for capitalisation and whether HR accounting has significant influence on investment decisions. The author used KCC and Chi-square for data analysis and concluded that human resource expenditure should be capitalised and that doing so will result in an improvement in the FR quality of service companies in Nigeria.

Prior studies on the problems of HR accounting include Bonsu et al. (2019), Arkan (2016), Ibarra and Cosico (2016), and Onyekwelu et al. (2015). Most prior studies show that the lack of specific accounting standards, acceptable valuation models, and a low level of awareness among stakeholders are the main problems of HR accounting. Some of the studies that prioritised the need for the development of valuation models as the main problem of HR accounting include Bonsu et al. (2019), Arkan (2016), Onyekwelu et al. (2015), and Stanko et al. (2014).

However, the current study revealed that the main problem of HR accounting in Nigeria is the need for a robust auditing framework for HR accounting information. This result was not expected based on the positions of prior studies. The result is a significant divergence from what is reported in the prior literature.

5.1.7 Contribution

The current study is a contribution to the scarce literature on the subject matter, to theory, practice, and knowledge. The study is among the few, if any, to study the relationship between HR accounting and FR quality of non-financial companies in Nigeria. Furthermore, the study is among the few to apply the qualitative characteristics of FR to measure the FR quality of non-financial companies in Nigeria. Therefore, the study is a contribution to the literature on the measurement of FR quality and an investigation of the impact of HR accounting on FR quality.

There are a few studies on HR accounting and FR quality that used primary data from accountants. Studying primary data from accountants is important given that accountants are involved at various stages of financial reporting and in investment and financing decisions. The study is, therefore, a contribution to the existing body of knowledge.

Although the use of qualitative characteristics of FR to measure quality has been on since the publication of the work of Beest et al. (2009), many studies on FR quality continue to adopt other measures. To the best of this author's knowledge, the current research is the first to study the relationship between HR accounting disclosure and FR quality using the direct measures of FR quality (qualitative characteristics).

5.1.8 Future research

This study provides generalisability based on the observation of a limited sample size of nonfinancial companies and accountants in Nigeria. However, there is a need to provide further grounding to stabilise the generalisability of the results over a larger population or different environments. Therefore, similar investigations are possible using different contexts, methodologies and populations to stabilise the theoretical generalisability of the findings.

To further ensure the stability and generalisability of the findings in this research, developing and adopting a weighted, non-dichotomous HR accounting index and extending the study to other stakeholders in FR are necessary. The implications of the findings of this study for future research include the need for developing a framework for auditing HR accounting.

In summary, this study will lead to conducting future research into the contribution of HR accounting disclosure and FR quality using different methodologies and a different population of reporting entities and stakeholders. The study will also trigger the interest of researchers to develop a weighted non-dichotomous HR accounting disclosure index and to also develop an audit framework for HR information.

5.2 Recommendations for Application

Before making a recommendation for application in research, it is worthwhile to consider the nature of the field and its development. Accounting has its roots in practice rather than theory (Bragg, 2018; Scott, 2015). Some writers consider it an art because of its origin (Wolk et al., 2004). Before the introduction of scientific research into the field of accounting, accountants used prevailing practices as the basis for making decisions (Scott, 2015; Godfrey et al., 2010). However, this trend has gradually changed over the years. The introduction of scientific research into accounting has transformed accounting from an art into a science. Accounting is now an academic field of study that uses scientific research in developing theories, frameworks, and standards (Wolk et al., 2004).

In disciplines with practical application, like accounting, policy formulation follows a sequence of events. Research is one of the steps in deliberation and problem-solving. Research enables policymakers to make informed decisions that support policy formulations. The application of scientific research in developing accounting theories and standards has transformed the profession into science and created robust accounting systems. For example, in a study on quoted companies in Nigeria, Adeleke et al. (2018) found that "there is a proportional relationship between accounting theory and financial reporting" (p. 193). Therefore, the contribution of accounting research to practice is very significant. Accounting as science has undergone tremendous changes over the years as a result of its adoption of research-based policy formulation (Godfrey et al., 2010). Accounting is dynamic. It changes to reflect changes in the business environment and economic conditions. This dynamism of accounting is one of the factors responsible for the survival of the accounting profession. The dynamism of accounting makes the profession remain relevant in the ever-changing business world.

Standardisation of accounting practices has helped in facilitating the development of the field. In accounting, standardisation follows scientific processes and ensures uniformity in accounting practice. Professional accounting bodies, regulators and standard-setters made the standardisation of accounting practice possible. Through the issuance of accounting standards, the accounting practice in Nigeria and many countries have become standardised.
Internationally, the standardisation of accounting began with the issuance of the IAS and IFRS. Standardisation ensures consistency in financial reporting around the world.

Accounting principles, standards, and legal provisions guide accounting practices. Some of these practices are discretionary, while others are mandatory. In Nigeria, for example, reporting entities disclose HR accounting information voluntarily. No accounting standards or legal provisions mandate reporting entities to report all the expected HR accounting information in their audited financial reports. On the other hand, it is mandatory to provide certain information in audited financial statements. These standards and laws require organisations to disclose mandatory information in audited financial reports. For instance, CAMA, 2020; the Banks and Other Financial Institutions Act (BOFIA), 2020; and the Insurance Act, 2003 (as amended) made some pronouncements regarding accounting practices and disclosures. Therefore, it is important to consider these provisions before making any recommendations for application.

In academic accounting research like dissertations, theses, and projects, researchers make recommendations for application at the end of their research (Smith, 2003). This research followed this trend by making some recommendations to help in policy formulation. The recommendations will shape the future of accounting practice. The aim of making these recommendations is to guide policymakers in making decisions. The recommendations originated from the data analysis with backing from relevant literature.

This research recommends that non-financial companies in Nigeria should adopt HR accounting and consider disclosing more HR accounting information in the FR. This recommendation is consistent with the suggestion of Odunayo and Festus (2020). Although there are no accounting standards or regulatory provisions that mandate these companies to adopt HR accounting, they can do so voluntarily. The companies can provide HR accounting information as part of their voluntary disclosure. Disclosing HR accounting information will increase the quality of the FR and will help in improving the decision-usefulness of the financial reports. Improvement in FR quality leads to improvement in investment and other decisions.

The major aim of financial reporting is to enhance the decision-usefulness of financial reports (Elliot & Elliot, 2017; Talfas, 2016; Beest et al., 2009). The outcome of the secondary data analysis of this study reveals that HR accounting disclosure is positively related to FR quality. The data from the professional accountants who participated in the study also supported this position. Non-financial companies should treat investments in HR as assets by recognising such investments on the balance sheet. Apart from improving FR quality, recognising the value of HR on the balance sheet as an asset will boost the profitability of non-financial companies.

An analysis of the financial statements of the non-financial companies reveals that not all the reporting entities provide the same degree of voluntary HR accounting disclosure information. Each company discloses its HR accounting information at its discretion. This study recommends the development of a framework for accounting and reporting human resources to ensure uniformity in HR accounting information disclosure and facilitate comparison among the financial reports of non-financial companies. Developing a framework for accounting for human resources before the issuance of an accounting standard will unify HR accounting practice and reporting. The framework for HR accounting will make it easier to analyse and compare different financial reports. Having a common framework for HR accounting will help in eliminating discrepancies and lapses in reporting HR accounting disclosure. An HR accounting framework will further strengthen the concept and practice of HR accounting in Nigeria. Besides, a framework for HR accounting will eventually lead to the development of a specific accounting standard for HR accounting. To achieve this, both ANAN and ICAN, in conjunction with FRC, have important roles to play.

Professional accounting associations and regulatory bodies should develop an auditing framework for HR accounting. The development of an audit framework is necessary, considering the uniqueness of human resources. A specific auditing framework for HR accounting will boost the confidence of stakeholders. Besides, the framework will promote the accuracy and completeness of HR accounting disclosure. The audit framework will also serve as a training manual for auditors who will audit companies using HR accounting. The framework will be a guide for auditors and a training manual for accounting students and professionals.

Over the years, many studies have developed many models for valuing and accounting for human resources. IFAC, IASB, FRCN, and other relevant regulatory institutions should consider harmonising and recommending the use of some of these valuation models. Harmonising and recommending the use of some of the valuation models will help companies decide on which model to adopt and use.

There is a need for the development of a specific accounting standard on HR accounting. The IASB should develop and issue a specific accounting standard on HR accounting. The accounting standard on HR accounting will serve as a guide in the adoption and implementation of HR accounting. Bragg (2018) maintains that "one of the reasons for using IFRS is so that anyone reading the financial statements of multiple companies has a reasonable basis for comparison since all companies using IFRS have created their financial statements using the same set of rules" (p. 1).

Issuing a specific standard on HR accounting is necessary to harmonise the variation in interpretation and application of the general standards on intangible assets. The authors, who believe the existing accounting standards can accommodate HR accounting, recommend the use of IAS 1 (disclosure) and IAS 38 (accounting for intangible assets). IAS 38 is the general standard on intangible assets. It does not take care of the peculiarities of HR accounting. Therefore, applying IAS 38 to HR accounting will cause discrepancies in the treatment of HR value. Barnes et al. (2019) noted that before the issuance of IAS 38, the treatment of intangible assets used to be on a case-by-case basis. Treating intangible assets on a case-by-case basis before the issuance of IAS 38 created problems and resulted in the emergence of different treatments for the same item. Consequently, the IASB had to issue IAS 38 to harmonise the treatment of intangible assets. The IASB did not contemplate the peculiarities of HR accounting before issuing IAS 38. IAS 38 only regulates the treatment of intangible assets under conventional accounting, not HR accounting.

Under conventional accounting, HR value is not an asset. In addition, new forms of intangible assets are emerging. The provisions of IAS 38 might not cover these new intangible assets. Although IAS 38 can effectively cover some intangible assets, it cannot conveniently cover others, like human resources. Reflecting on this, Barnes et al. (2019) noted that "recent years have seen an increase in the use and trading of crypto-assets such as Bitcoin and Ether. These may meet the relatively wide definition of intangible assets and can be accounted for under IAS 38 "(p. 1214). Because of the confusion that preceded the issuance of IAS 38 and the need to avoid overburdening this accounting standard, the IASB should issue a new standard on HR accounting. The new accounting standard on HR accounting should accommodate the peculiarities of human resources effectively.

There is a need to create awareness about HR accounting among the numerous stakeholders in financial reporting. Professional accounting bodies should take the lead in creating awareness about HR accounting. Creating awareness about HR accounting will help in unifying the understanding of the concept and practice of HR accounting. Understanding the concept of HR accounting will give professional accountants, theorists, and other users of financial reports a clear understanding of the intricacies and complexities of the concept. Professional accounting bodies should take the lead in educating their members through their various continuous professional development programmes, workshops, seminars, and conferences. There is a need for regulatory agencies in the education sector to include HR accounting among accounting courses in the curriculum of tertiary institutions. Teaching accounting students in tertiary institutions about HR accounting will facilitate the training of human resource accountants.

There is a need to amend laws that regulate accounting, financial reporting, and taxation laws in line with the concept of HR accounting. The current legislation does not regard investment in HR as an asset. Specifically, the Federal Government of Nigeria should amend tax laws to recognise the investment in HR accounting as a capital expenditure that will attract capital allowances. The Federal Government should also amend the regulatory legislation like the CAMA, 2020 and BOFIA, 2020 to mandate companies in Nigeria to include HR accounting information as part of the information in audited financial reports.

Ensuring the successful implementation of all the recommendations of this research requires a multifaceted approach. It requires the support of other professionals and experts from outside the field of accounting and financial reporting. Some of the key experts and professionals that may be of importance to the successful implementation of these recommendations include human resources managers and professionals, actuaries, computer scientists and programmers, and politicians.

HR accounting requires some data from human resources managers. There is no doubt that human resources accountants need some important information concerning human resources. Information like age, qualifications, levels or ranks of personnel, years of service, expected retirement dates and so on is required for the effective take-off of an HR accounting system in an organisation. Such information may be readily available in the human resources or personnel department. The human resources manager may have such information at his or her disposal. Accountants need the support and collaboration of HR managers and professionals to support the functions of HR accounting with their expertise and knowledge. Aside from the experts in

HR management, the expertise and services of actuaries will be handy in the estimation of the expected service period of employees and the determination of their monetary value.

In today's world, most activities are computer-based. All organisational activities are computerised. Many organisations have deployed computerised accounting information systems to support information sharing and decision-making. HR accounting is complex. A computerised HR accounting system will simplify it and make it easy to use. A computerised HR accounting system will be more accurate than a manual HR accounting system. To ensure efficient implementation of HR accounting, there is a need to develop a computerised HR accounting system. Accountants need to engage the services of experts in computers and computer programming to develop computer programmes that can take care of the peculiarities of HR accounting. There is also a need to integrate the new HR accounting programme with the existing accounting programs. Therefore, the effective implementation of the recommendations of this research will not be possible without incorporating the development of a computer-based HR accounting system.

This research recommended the amendment of existing regulatory and tax laws. Achieving this will not be easy without the support of stakeholders in legislation. In Nigeria, the legislation process involves sending a request to the National Assembly. The request is then debated as a bill in both the House of Representatives (the lower chamber) and the Senate. The bill is sent to the President for signature after the first and second reading in both the lower and upper chambers. This process involves some lobbying and follow-up. To implement the recommendation of amending these laws, accountants and professional accounting bodies should be in contact with politicians who are in the legislative system of the country. ANAN and ICAN should put in place a mechanism to lobby these politicians to make them understand the reasons behind these amendments.

5.2.1 Valuation model development and proposed reporting framework

Having looked at some of the human resources valuation models developed by different researchers and their strengths and weaknesses, it is pertinent to consider proposing an alternative to these models. It should be noted that the objective of the proposed model is to facilitate the valuation of HR in a simplified manner that will be acceptable to the accountants based on the criteria for valuation and recognition of assets in the audited accounts set by IFRS. The developed model is substantially dependent on the financial reporting theory, the historical cost concept, and the recognition of HC as one of the entity's resources that fulfils the requirements of the resources-based view criteria. The aim of this is to satisfy the requirements of a highly regulated financial reporting system. According to the provisions of IFRS, only items that meet certain criteria can be considered assets and must be valued using any of the specified methods to be recognised in the audited accounts and reports (IASB, 2018). As a result, it is necessary to examine the provision of IFRS concerning assets and asset valuation.

The "Conceptual Framework for Financial Reporting" issued by the IASB in March 2018, which became effective January 1, 2020, provides insights into the valuation and recognition of assets for financial reporting (IASB, 2018). According to the framework, an item is recognised in any of the statements contained in the financial report only if it fulfils the criteria of being classified as either an asset, liability, equity, income, or expense. The framework further revised the definition of assets. An asset is now defined as "a present economic resource controlled by the entity as a result of past events" (IASB, 2018, p. 8). The framework further describes an economic or monetary resource as "a right that has the potential to produce economic benefits" (IASB, 2018, p. 8). This is a departure from the former definition of assets given by the same organisation, which defined an asset as "a resource controlled by an entity as a result of past event and from which future economic benefits are expected to flow to the entity" (IASB, 2018, p. 8). A deeper examination of the two definitions reveals that the expectation of future benefits to be derived from an item as contained in the old definition has been modified and is made less important in the revised definition. This clearly shows that the expectation of future benefits of a monetary resource need not be certain and may not even be realised. Additionally, the revised definition emphasises that what matters in the determination of an asset is that the asset should be a monetary resource and not the ultimate economic benefits derivable from it. This is a setback for existing human resource valuation models, which are dependent on the future economic benefits of the human asset.

5.2.2 Model development

A model for the valuation of human resources developed in this study has its basis on the historical cost model. The modified historical cost is based on the idea of simplicity, understandability, and conformity with the current rules and accounting standards. Additionally, the model is devoid of the unnecessary inclusion of predictions, speculations, and estimations as far as possible.

5.2.2.1 Assumptions

The following assumptions underpin the proposed model:

1. A valuation model should be simple and easy to apply.
2. A valuation model should be consistent with the stipulations of IFRS on the measurement and valuation of assets.
3. Historical cost eliminates inconsistencies and uncertainties, thereby enhancing faithful representation.
4. The cost of medical care is part of the maintenance cost of human assets; therefore, it should not be capitalised but expensed in the year it is incurred.

5. The value of HR is amortised over its expected service period. Any unamortised cost at the end of the service period due to either retirement, withdrawal of service, or death is expensed in the year it occurs.

6. The value of HR can appreciate, but it can also depreciate. The appreciation in value in any accounting year is assumed to be equivalent to the annual increase in salary or wages of the employee.

5.2.2.2 Value identification and coding

(a) Value identification

Based on the historical approach, the following cost elements and variables are considered significant in the valuation of HR using the modified historical cost approach.

(i) Acquisition cost: This includes the costs of recruitment, selection, hiring, and placement. These costs include all costs associated with employment processing, such as job advertisement, application screening, aptitude tests, and consultancy fees where consultants are used to recruiting workers for the company.

(ii) Training and development costs: This includes the cost of new employee induction training as well as on-the-job training and development programs.

(iii) Welfare cost: This includes all costs incurred to improve the workers' welfare.

(iv) Safety and other costs: This includes employee security and safety costs, as well as other related costs. Safety and other costs exclude medical expenses. Unlike in the traditional historical cost model, medical expenses are not regarded as part of the costs to be capitalised. Medical costs are regarded as an expense incurred for the maintenance of human assets. Therefore, it should be expensed in the income statement of the year in which it is incurred.

(v) Annual increment: This is the amount equal to an employee's annual salary increase. This is considered an appreciation of the value of the HR of the reporting entity. The appreciation of the value of HR is in line with the learning curve theory.

(vi) Service period: This is the expected length of time (in years) that an employee will stay with a company from the time they start working there until they leave.

(b) Variable coding

The variables of the proposed model are coded as shown below.

a = acquisition costs t = training

and development costs w =

welfare costs s = safety and other

costs i = annual increment p =

service period

5.2.2.3 Proposed model

From the items identified above:

The Human Resource Value (HRV) of an individual worker at the end of year one when there is no increment is determined thus:

$HRV_i = (\quad + \quad + \quad + \quad)$

Therefore, the HRV of a group of employees at the end of year one with no increment is given as:

$HRV_g = \Sigma(\quad + \quad + \quad + \quad)$

The amortisation of an individual employee at the end of year one is determined as

Amortization = $\underline{\qquad\qquad}$ ( )

Amortisation of group of employees = Σ $\overline{\qquad}$( )

From the above equations, the net book value (NBV) of an individual worker without increment is given by:

$$\text{NBV of } \quad = (\; + \; + \; + \;) - \frac{+ \; + \; +}{\quad}$$

The net book value of a group of workers without increment is given by:

$$\text{NBV of } \quad = \quad (\; + \; + \; + \;) - \frac{+ \; + \; +}{\quad}$$

Where the annual increment is introduced in the subsequent years, the equations will be modified to capture the increment, thus:

For an individual worker,

$$\text{NBV of } \quad = (\; + \; + \; + \; +) - \frac{+ \; + \; + \; +}{\quad}$$

For a group of workers,

$$\text{NBV of } \quad = \quad (\; + \; + \; + \; +) - \overline{\qquad}) \quad \begin{matrix} + & + \\ + & + \end{matrix}$$

The above model may be referred to as the modified historical cost model for valuing human resources for disclosure in the financial reports.

5.2.2.4 Possible limitations of the developed model

Some of the possible limitations of the developed model include the following:

1. 1. Amortisation will have to be computed annually or whenever there is a need to know the book value of human resources.

2. 2. The expected service period will have to be determined and is based on probability and estimation.

5.2.3 Proposed accounting and reporting framework

One of the objectives of this research is to propose how human resources costs will be accounted for and reported in the financial statements. This is discussed in the following two subsections.

5.2.3.1 Proposed accounting framework

The following entries are suggested concerning the cost incurred on human resources as described in section 5.2.2.2.

i- When payment for any of the cost items (acquisition, training, welfare, safety) is made: debit the human resources investment account and credit cashbook to capitalise the amount.

ii- When any of the cost items are incurred on credit, debit the human resources investment account and credit the creditor's account to capitalise the amount. iii- When HR value is amortised, debit human resources amortisation account with the amount amortised and credit human resources investment account to record the diminishing in value of human resources.

iv- When there is an increase in the salary of an employee, debit the human resources investment account and credit the human resources impairment account with an amount equivalent to the increment received by the employee. This represents an increase in the value of human resources.

v- Where an employee leaves the services of the company before reaching the end of his or her service period, either as a result of the dismissal, death and so on, the net book value of the employee will have to be written off from the book. To do this, the human resources impairment account will be debited with the net book value of the employee and the human resources investment account will be credited. This procedure will also apply when an employee retires at the end of his service period and the net book value of the employee has not turned to zero.

vi- At the end of the period, the debit balance in the HR Account represents the net book value of the human resources which will be disclosed in the balance sheet. vii- At the end of the period, balance the HR impairment and transfer the debit balance by crediting the account and debiting the profit and loss account as an expense.

viii- Where the impairment account has a credit balance, the balance is transferred to the HR account.

5.2.2.2 Proposed reporting framework

Financial reporting is an avenue through which entities communicate with their diverse stakeholders. The major aim of FR is the provision of useful financial information to the users of financial reports who make use of such information in decision-making relating to the provision of funds and other resources to entities (Bragg, 2019; Elliot & Elliot, 2017; Talpas, 2016). In making such decisions, users of financial reporting information consider the prospects of an entity in terms of the generation of cash flows and the management’s style and stewardship in managing the resources of the firm. All these factors are greatly affected by human resources; therefore, it is likely that the presentation of information on human resources will affect the relevance of accounting information.

As noted in chapter two, the literature reveals conflicting positions among researchers as to how to present human assets on the balance sheet. Those who advocate strict adherence to HR accounting principles, such as Akintoye et al. (2015), Babajide (2013), and Akintoye (2012), recommend recognising HR value on the balance sheets of reporting entities as an investment or asset. Other studies recommend the disclosure of HR value. Some of the studies that recommend the disclosure of human resources values believe this should be done by disclosure in the notes to the accounts, while others believe that this can be more advantageous if a separate statement dedicated to HR is added to the annual financial reports (Petkov, 2010).

Based on the literature, this study proposed the adoption of a two-way reporting of HR in the financial statements. Under this approach, HR will have two values: the actual value determined using the modified historical cost model developed in 5.2.2 and a nominal value. The value determined using the modified historical cost model will represent the value or cost of the HR to the reporting entity. This value will then be recognised on the balance sheet as an investment in HR by the reporting entity. This proposal is in line with the recommendations of Akintoye et al. (2015), Babajide (2013), and Akintoye (2012).

On the other hand, the nominal value will be the estimated value of the HR computed based on certain attributes. This study suggests the adoption of the determinants of HR value in Stanko et al. (2014) for the determination of the nominal value of HR. According to Stanko et al. (2014), many factors contribute to the productivity of an employee. Stanko et al. (2014) identified the main factors that contribute to an employee’s value to include education, experience, performance, natural attributes, time remaining, relationship, and morale. These attributes should be measured using a standardised index or rating and converted into money equivalents. Both the index or rating and the equivalent money value should then be disclosed in the human resource statement in the financial report. This report should be an aggregate or group of employees. There will be no need for the disclosure of an individual employee’s rating or value. The reason for the avoidance of the disclosure of an individual employee’s rating and value is to protect the confidentiality of such information. This is because, as noted in chapter two, Arkan (2016), one of the concerns of some employees about HR accounting is the fear of the bridge.

The value of the human resources determined using the model will be recognised as an investment in the human asset by the reporting entity on the balance sheet. On the other hand, the nominal value will be presented in a separate human resources statement as part of the disclosure about human resources in the financial report.

5.3 Recommendations for Future Research

It is a common practice in accounting research to make recommendations for further investigation at the end of a study (Saunders et al., 2016; Smith, 2003). It is important to make recommendations for future research at the end of a research project. Recommendations for future research help in directing the course of new research to areas that deserve more attention. Apart from serving as a guide to other researchers, a recommendation for future research documents alternative approaches to solving the research problem. Researchers recommend further research irrespective of whether they intend to carry out more research in the area they identified or not. Leavy (2017) opined, “It is customary to include implications for future research on your topic (including if you personally plan to conduct further research in the area)” (p. 116). Leavy (2017) rhetorically asked: “What are the implications of the results of your study for others who want to research this topic” (p. 116)? Smith (2005) argued that accounting research “must be interesting and have implications for future research or business practice” (p. 161).

In line with the above advice, researchers in accounting in general and in HR accounting, in particular, make recommendations for future research. Some of the studies in HR accounting that made recommendations for future research include Petera and Wagner (2017), Wickramasinghe and Fonseka (2012), and Wyatt and Frick (2010). Therefore, this research makes a recommendation for further study on the topic. The findings and limitations of this research formed the basis of the recommendations made in the study. This study has identified many areas for further investigation. This section of the dissertation contains recommendations for further research. The aim of making these recommendations is to ensure that future studies overcome the limitations of this research. The limitations of this study could provide opportunities for future research. The limitations of this study could be the starting points for future research.

The recommendations of this research provide opportunities for researchers to confirm or refute the findings of this research. These recommendations lay the foundation for more investigations into the relationship between HR accounting disclosure and FR quality. As Arkan (2016) advised, these recommendations will lead to the emergence of many empirical investigations in the field of HR accounting. Implementing the recommendations of this research will form the basis for building a robust framework for HR accounting in Nigeria.

Future research on the relationship between HR accounting disclosure and FR quality should use larger populations. Firstly, researchers should increase the size of the samples in their studies. Therefore, future investigations should draw samples from all the 36 states in Nigeria and the FCT. Future studies should draw samples from one state in each of the six geopolitical zones of Nigeria. The extension of future studies to other parts of Nigeria will reflect the diversity and heterogeneity of the country.

This research recommends that the population of accountants in future studies should include other accountants who are not members of the ANAN or ICAN. Future research should also study the data from other professionals and stakeholders in accounting and financial reporting. Those to be studied in future research should include financial analysts, stockbrokers, investors, shareholders, regulators, and management of corporate entities. There is a need for future research to replicate this research with similar populations in other countries. Therefore, future research should replicate this research in other countries.

This research utilised secondary data extracted from the 2019 audited reports of listed nonfinancial reporting entities. Therefore, future studies should extend the scope of their studies to include financial companies quoted on the floor of the NSE. There should be a study of each of the eleven sectors of the NSE. Studying each will give an in-depth view of the relationship between HR accounting disclosure and FR quality.

As noted in the above paragraph, this research used the 2019 financial reports to determine the link between HR accounting disclosure and FR quality. There are studies in the field of HR accounting and on FR quality, which make use of data spanning over three to five years. For instance, Martínez-Ferrero (2014) used panel data covering the period 2002 to 2010. Nwaobia et al. (2016) used data from 2010 to 2014 financial reports of 10 listed manufacturing companies to study the effect of earnings quality on investors' decisions. Jesuwunmi et al. (2017) used panel data from 2011 to 2016 financial reports of 186 listed Nigerian companies. Therefore, future studies should expand their investigations to cover financial reports of more than one year. Future studies should adopt a panel study technique. Panel data will allow researchers to see the relationship between HR accounting disclosure and FR quality over a long period. There is a need to replicate this study in other countries. Researchers should use the financial reports of companies listed on other stock exchanges. Such research will further confirm or refute the findings of this research.

An audit is an integral part of the stewardship of accounting (Major, 2011). Apart from being a legal requirement (CAMA, 2020), an audit serves as an assurance to the users of financial reports. Okaro and Okafor (2013) posited that "an audit adds value to financial statements by adding credibility to reported information and thus enables interested stakeholders to make economic decisions using the information" (p. 391). An audit assures the users of FR and the public about the truth and fairness of the representations in the audited financial reports.

The development of auditing standards and guidelines follows the growth in accounting. In other words, the current auditing standards, guidelines, and frameworks are suitable for the traditional accounting system, which treats HR value and investments in human resources as expenses. Therefore, the current auditing standards, guidelines, and frameworks are for use in an accounting system that does not treat HR value or investments in human resources as an asset. Contrary to this, an HR accounting system recognises HR value and investments in human resources as assets. Therefore, there is a need to have a robust audit framework for HR accounting.

Future research should develop methods and strategies for auditing HR accounting records and information. Having a good audit framework for HR accounting will boost its credibility and increase the reliability of HR accounting disclosure information. Researching into the development of the audit framework for HR accounting is unnecessary to ensure quality in the audit. Business failures witnessed in the recent past have called for concern about audit quality. Stressing the importance of audit quality, Okaro et al. (2018) stressed that “The issue of audit quality has been a major concern for the accounting profession and accounting regulators globally, given the consequences associated with recent audit failures...” (p. 317). To avert such ugly incidences in the future, research should engage in finding ways to audit HR accounting disclosures.

This study's findings imply that the absence of a generally accepted method of valuing HR accounting is one of the critical problems of HR accounting in Nigeria. Many prior studies have indicated that the lack of an acceptable valuation model for human resources is one of the major problems of HR accounting (Rekha & Pavithra, 2019; Monday, 2017). In response to this, many studies have proposed different valuation models for human resources. Some of these studies include Arkan (2016), Hossain (2015), Oprean and Oprisor (2014), and Abubakar (2011). Despite the number of valuation models developed or recommended in prior studies, the problem of valuation models persists. Since there are many human resource valuation models available, future research should concentrate on testing, comparing, and harmonising the existing valuation models.

This research used Syed's HR accounting disclosure index (Syed, 2009). The majority of the prior studies involving the determination of the degree of HR accounting disclosure used Syed's index. Syed's index has some limitations. Syed's index is dichotomous and unweighted. It only takes account of the presence or absence of a disclosure item. Vazakidis et al. (2013) explained that an unweighted index assumed that "all companies are identical and, therefore, no difference needs to exist in disclosure requirements. Thus, all items of information in the index are considered equally important to the average user" (p. 116). It is common knowledge, in reality, that some of the disclosure information is more important to users of financial reports compared to others. This could be the reason behind making some disclosures mandatory while others are discretionary. As explained by Vazakidis et al. (2013), Syed's index assumes all the HR accounting disclosure items have equal importance.

In addition to the above limitation, Syed's index does not take into account how well a reporting entity discloses its HR accounting information. Some reporting entities provide detailed information, while others provide scanty information. In addition to providing facts and figures, other reporting entities use graphics and charts to support the information they provide.

There is a need to improve Syed's index to make it more robust and scientific. Therefore, future research should aim at improving the quality of Syed's index. Future studies should also consider the possibility of developing an alternative index for measuring the level of HR accounting disclosure. An improved Syed's index will measure HR accounting disclosure more accurately. The enhanced Syed's index will also make comparisons between different reporting entities more meaningful. Apart from improving the quality of Syed's index, future research should modify the index to develop an alternative index suitable for use with primary data.

Having such an index would be useful in determining the level of HR accounting disclosure based on the data from stakeholders in financial reporting. Presently, it is not possible to quantify how these stakeholders perceive the current level of HR accounting disclosure.

There is a need to investigate the interaction between HR accounting disclosure and FR quality in more detail. There are two classes of qualitative characteristics of FR. The two types are fundamental and qualitative characteristics (IASB, 2018). Future research should look into the impact of HR accounting disclosure on each of the two parts. Classifying the qualitative characteristics of FR into two (fundamental and enhancing) will allow the implications of HR accounting disclosure on each of the two classes of qualitative characteristics of FR to be determined.

Furthermore, future research can study the effect of HR accounting disclosure on each of the components of qualitative characteristics of FR: “faithful representation, relevance, understandability, timeliness, comparability, and verifiability” (Kaawaase et al., 2021, p. 354).

This approach will make it possible to investigate the effects of HR accounting disclosure on each of the components of the qualitative characteristics of FR.

This research used the Kruskal-Wallis test to determine the existence of a significant difference among the groups of professional accountants on the influence of HR accounting disclosure on FR quality, the reasons for excluding HR value from the balance sheet, and the main problems with HR accounting in Nigeria. The Kruskal-Wallis test is a non-parametric alternative to ANOVA (Aldrich & Cunningham, 2016; Pallant, 2016). Future studies should use T-Test, ANOVA, or other parametric tests to analyse data from professional accountants.

One of the methods researchers use to investigate the effects of certain variables on others is the ex-post facto research design. The design enables researchers to study the after-effects of variables. Ex-post facto research is a “causal-comparative research design” (Jesuwunmi et al., 2019, p. 52). Some researchers in HR accounting have used the ex-post facto design in their studies. For example, Odunayo and Festus (2020) used the ex-post facto to study the effect of HR accounting on the FR quality of Nigerian oil and gas companies. Inua and Oziegbe (2018) studied the effects of HR accounting attributes on the financial performance of listed banks in Nigeria using the ex-post facto design. Similarly, Jesuwunmi et al. (2017) used ex-post facto in their study. Enyi and Akindehinde (2014) also used the ex-post facto design to investigate how HR accounting affects investment and employment decisions. Therefore, future research should adopt the ex-post facto research design in investigating the association between HR accounting and FR quality.

5.4 Conclusion

The economic transformation from manufacturing-based to knowledge and information-based has brought out the importance of HC (Monday, 2017). In the knowledge-based economy, the competencies of the workforce are a key factor in the determination of the success of business organisations. For a long time, economists have acknowledged the place of human resources by developing the human capital theory and including labour as one of the factors of production. However, accounting did not contemplate including human resources in its reports until after the emergence of HR accounting. This may largely be due to the characteristics of the period of development of accounting. Accounting enjoyed geometric growth during the industrial revolution era. During the period of the industrial revolution, physical assets were the most important assets of businesses because the economy was manufacturing-based.

In recognition of the importance of human resources in helping organisations achieve a competitive advantage, researchers considered the possibility of incorporating human resources as part of the matters accountants would report in financial reports. The authors developed a concept now known as HR accounting (Shukuhian & Ashraf, 2019; Arkan, 2016).

Contrary to conventional accounting, HR accounting considers investment in human resources and HR value as part of the assets of a business (Akintoye et al., 2018; Dhirubhai, 2018; Dey & Sarkar, 2015).

As part of the development process of HR accounting, researchers have identified and tried to find solutions to many of the challenges of HR accounting. Despite the effort of prior studies in finding solutions to these problems, HR accounting has not gotten accepted into the main accounting and financial reporting arena. As such, it remains a theoretical concept with little practical application (Arkan, 2016).

One of the areas that require the attention of researchers in HR accounting is the impact of HR accounting disclosure on FR quality. Despite the agitation by the advocates of HR accounting for the incorporation of HR values into the balance sheets of reporting entities, researchers have not empirically proved that HR accounting disclosure improves FR quality (Ying-hong, 2006). Because of this and the problem of the valuation model, researchers like Ying-hong (2006) and Petkov (2010) argued that HR accounting disclosure should only be made in the notes to the accounts of financial reports. Specifically, Ying-hong (2006) argued that HR accounting has not been widely embraced for application in practice for a variety of reasons. Ying-hong (2006) further argued that HR accounting information has failed to meet “the two most important qualitative characteristics of accounting information” (p. 59). Basing his argument on the claim that HR accounting information does not meet the qualities of being relevant and reliable, Yinghong (2006) insisted that HR accounting disclosure should only be in the notes to the accounts. The positions of Petkov (2010) and Ying-hong (2006) are contrary to the positions of researchers like Oko (2018), Arkan (2016), Ijeoma (2015), and Okpala and Chidi (2010).

It was due to the above controversy in the literature that this study sought to explore the connection between HR accounting disclosure and FR quality. The research also investigated the professional accountants on the contribution of HR accounting disclosure toward improving FR quality. Furthermore, the study investigated the reasons behind the exclusion of HR value from being recognised on the balance sheet and the major problems of HR accounting, which hinder the full adoption of the concept.

This research used the Saunders et al. (2019) research onion in defining its philosophy and other parameters. The study adopted the positivist philosophy and used deductive reasoning in its approach to theory development. Positivism is a research philosophy used in both the natural and social sciences. The choice of this philosophical approach was made due to its potential to produce unbiased results suitable for making a generalisation. Stressing the importance of the positivist approach, Saunders et al. (2019) explained that "positivism relates to the philosophical stance of the natural scientist and entails working with an observable social reality to produce law-like generalisations. It promises unambiguous and accurate knowledge…" (p. 144).

The research used the multi-method quantitative method. According to Saunders et al. (2019), the multi-method quantitative method is a quantitative research method that employs the use of more than one means of data collection. This choice made it possible to use the two types of data (primary and secondary) for analysis in this research. Therefore, the choice of the multimethod allowed this research to explore the link between HR accounting disclosure and FR quality and investigate professional accountants on the influence of HR accounting disclosure on FR quality.

The research was a cross-sectional study and used the survey method of data collection. A cross-sectional study involves data collection once. (Stockemer, 2019) describes a crosssectional survey as "a survey that is used to gather information about individuals at a single point in time. The survey is conducted once and not repeated" (p. 31). In this research, the two types of data (primary and secondary) were collected once. The secondary data collection covered only the annual reports for the year 2019. The respondents who provided the primary data answered the questionnaire once. Many of the prior studies are cross-sectional. Crosssectional surveys “are quite frequently used by researchers to tap into all types of research questions” (p. 31). Some of the cross-sectional studies in accounting research include Jesuwunmi et al. (2017) and Kaur et al. (2016).

This research used regression to investigate the link between HR accounting disclosure and FR quality. Regression analysis is one of the important statistical tools of data analysis for investigating the effect of an independent variable on a dependent variable. Many prior studies in HR accounting have used regression analysis to examine the relationships among variables. For instance, Oko (2018) used simple regression to explore the link between HR accounting and corporate profitability. Khodabakhshi (2015) used linear regression to study the relationship between HR accounting disclosure and firm value. Akintoye (2012) used simple linear regression analysis to study the effect of HR values on effective financial reporting.

This research also used the Kruskal-Wallis test to analyse the data from professional accountants on whether HR accounting disclosure influences FR quality. In addition, the research examined the reasons for the exclusion of HR value from the balance sheet in conventional accounting and investigated the major problems of HR accounting in Nigeria. The Kruskal-Wallis test is the non-parametric alternative to ANOVA. Researchers use the Kruskal-Wallis test to determine differences among groups. Prior studies that used the KruskalWallis test include Ijeoma and Arounu (2013) and Bhutto et al. (2012).

This study used data from the 2019 financial statements of quoted non-financial companies to investigate the relationship between HR accounting disclosure and FR quality. Additionally, the research used primary data to examine the data from professional accountants on the contribution of HR accounting disclosure toward improving FR quality. The research also examined the reasons for not reporting HR value on the balance sheet and the major problems of HR accounting in Nigeria. Therefore, simple linear regression and the Kruskal-Wallis test are the two statistical tools used in the research.

In determining the relationship between HR accounting disclosure and FR quality, the independent variable (HR accounting disclosure) was measured using fifteen items of Syed's HR accounting disclosure index. Syed's index was first published in (Syed, 2009) and has been used in many prior studies on HR accounting disclosure. Some of the studies that used Syed's index include Akintoye et al. (2016) and Khodabakhshi (2015). To determine the HR accounting disclosure index using Syed's method, the financial report of each sampled company was scrutinised. A company got one point for disclosing each of the HR accounting disclosure items and got nothing for not disclosing any of the disclosure items. The overall HR accounting disclosure index of the company was calculated by dividing the total score obtained by the company by the total maximum points (15) available. The result is then multiplied by 100 to convert the index to a percentage.

The measurement of the dependent variable, FR quality, was derived from the operationalization of the qualitative characteristics of FR. This measure was favoured against other measures of FR quality because it takes into account both the financial and non-financial information of a financial statement. Mahboub (2017) argued that the qualitative characteristics of FR conveniently measure "the quality of financial and non-financial reporting information in the annual report, taking into consideration all dimensions of decision usefulness as interpreted in the exposure draft ..." (p. 174-175). The qualitative characteristics were first operationalized by Beest et al. (2009) and have been adopted in many prior studies. Some of the prior studies that adopted the operationalization of qualitative characteristics of FR include Alawaqleh and Almasri (2021), Ciocan et al. (2021), Seiyaibo and Okoye (2020), Tran et al.

(2020), Mahboub (2017), Mbobo and Ekpo (2016), Kythreotis (2014), Nyor (2013), and Tasios and Bekiaris (2012).

This research used a sample of professional accountants to determine the contribution of HR accounting disclosure to FR quality, the reasons for excluding the HR value from the balance sheet, and the main problems of HR accounting in Nigeria. The research used registered members of the two recognised professional accounting bodies in Nigeria, ANAN and ICAN. Many prior studies used the population of professionals. For example, Tasios and Bekiaris (2012) used a population of professional accountants in Greece to determine auditors' perceptions of FR quality. Akinyomi and Tasie (2012) used a population of chartered accountants in Nigeria to determine accountants' perceptions of factors influencing auditor independence. Furthermore, Okafor (2009) used a sample of professional accountants to investigate accountants' perceptions of HC disclosure in the FR.

The research used Yamane’s formula to compute the sample size of the study. Using Yamane’s formula, the sample size of the professional accountants was calculated to be 70. The online questionnaire for this study was sent to the respondents who were selected randomly.
Furthermore, the sample size of the non-financial companies was determined by applying Yamane’s formula after stratifying the population of the companies according to the sector where they were listed on the NSE. Yamane’s formula gave the sample size of the non-financial companies as 86 out of the total population of 112 companies. As stated above, for the year 2019, the audited annual financial statements of the sampled companies are the sources of the secondary data used in this study. The research used a five-point Likert scale questionnaire to collect primary data. The research instrument underwent review processes, including pilot studies. The review and the pilot test aimed to ensure that the research instrument passed reliability and validity tests. The research used Cronbach’s alpha to test the reliability of the research instrument.

As indicated earlier, the research utilised primarily as well as secondary data. The research collected secondary data from all 86 non-financial companies. To collect the primary data from the respondents, a total of 81 messages in email and WhatsApp were randomly sent to the target sample. Out of the 81 massages, 75 were delivered to the recipients. The remaining six messages were returned undelivered. Therefore, 75 recipients received the link to the online questionnaire for this study. However, only 46 recipients responded by filling out and submitting the online questionnaire. This gave an active response rate of 61.33%. According to Saunders et al. (2016), this response rate is reasonable.

For data analysis, this research made use of SPSS version 23 to simplify the process. SPSS is a popular statistical software for research used in many prior studies. Stockemer (2019) described SPSS and STAT as “probably the most used statistical programs in the social sciences” (p. 73). George and Maller (2019) succinctly describe SPSS as “a powerful tool that is capable of conducting just about any type of data analysis used in the social sciences, the natural sciences or in the business world” (p. xii). Some of the prior studies that used SPSS include Al Hanini (2018), Adeleke et al. (2018), and Jesuwunmi et al. (2017).

The results of the regression analysis revealed a significant and positive correlation exists between HR accounting disclosure and the level of FR quality. In addition, the results reveal that HR accounting disclosure significantly improves the FR quality of non-financial companies in Nigeria. As a confirmation of the results of the regression analysis, the results of the Kruskal-Wallis Test show that professional accountants believed that HR accounting disclosure improves FR quality. An analysis of the Kruskal Wallis Test results indicates that the professional accountants differ regarding the reasons for not recognising HR value on the balance sheet. Despite the differences, data from the professional accountants show that the lack of a generally accepted valuation method is the main reason for not recognising HR value on the balance sheet. Additional analysis of the primary data shows that the lack of an audit framework for HR accounting and the absence of a generally accepted valuation model for HR accounting are the main problems of HR accounting in Nigeria.

Some limitations of this research include the small size of the population for primary data and the use of cross-sectional data. The use of a dichotomous and unweighted index is another weakness of the study. The main objective of any research is to find answers to research questions (Creswell & Creswell, 2018; Saunders et al., 2016). Despite the limitations of the current study, the research met all of its objectives and answered all four of the research questions stated in chapter one. The results of the hypotheses tests discussed in chapter four (4.3.2.1 to 4.3.2.4) provided answers to the research questions.

The findings from this research agree with the conceptual framework of the research. The conceptual framework indicates that HR accounting disclosure improves FR quality and helps in investment, financial, and other decisions. This finding confirms the postulation of the HC theory, the RBV theory, the stakeholder theory, and the FR theory. The HC theory emphasises the importance of HC in the running of business organisations efficiently (Micah et al., 2012). The RBV postulates that the most significant asset of a business organisation is the unique asset that helps the business to achieve a competitive advantage (Liang & You, 2009; Barney, 1999). The financial reporting theory postulates that the essence of FR is to support decision-making and the reporting of information that can influence such decisions (Bragg, 2019; IASB, 2018; Elliot & Elliot, 2017; Bushman & Landsman, 2010).

This study made some recommendations for application. The study used empirical evidence to recommend the adoption and improvement of HR accounting. The study recommended the establishment of a framework for the adoption of HR accounting and the subsequent standardisation of the practice of HR accounting because issuing a specific accounting standard on HR accounting will ensure uniformity in HR accounting disclosure. The research also recommended the development of an auditing framework for HR accounting to give credence to the concept of HR accounting and information. The study further recommended the amendment of tax and regulatory laws to accommodate the peculiarities of human resources and HR accounting. As part of the recommendations for application, this study recommended the inclusion of HR accounting in the curriculum of tertiary institutions in Nigeria and awareness creation among the various stakeholders in accounting and financial reporting.

As part of the recommendations for future research, this study recommends the expansion of the population size of future research to include professional accountants in other states and each of the eleven sectors of the NSE. The research also recommended the inclusion of other stakeholders in the scope of future research. The research recommended the use of multiple regression and panel data in the investigation of the relationship between HR accounting disclosure and FR quality, using the operationalisation of the qualitative characteristics of FR. The research also recommended the use of ANOVA in analysing the data from stakeholders in financial reporting. The research observed that Syed’s HR accounting disclosure index has some lapses and recommended that future research should improve the index.

This research has contributed to the literature by showing that it was possible to use the qualitative features of FR to construct the FR quality index and investigate the influence of HR accounting disclosure on the quality of FR. Prior studies that investigated the relationship between HR accounting disclosure and FR quality did not make use of the qualitative characteristics of FR. Prior studies on the relationship between HR accounting disclosure and FR quality used financial data as proxies of FR quality, leaving other non-financial data out. Studies like Odunayo and Festus (2020) used earning quality, accounting conservatism, earning smoothness, and persistence as proxies of FR quality. All these proxies are financial data. Using both financial and non-financial data in investigating the relationship between HR accounting disclosure and FR quality is necessary because HR accounting disclosure includes both financial and non-financial data.

Despite its limitations, this research has met its objectives and contributed to the existing literature. The research found a noticeable and impactful relationship between HR accounting disclosure and FR quality. The research used the qualitative characteristics of FR as operationalised by Beest et al. (2009) to construct the FR quality index and Syed's HR accounting disclosure index to examine the relationship between HR accounting disclosure (the independent variable) and FR quality (the dependent variable). The research concluded that HR accounting disclosure significantly contributes to the FR quality of quoted non-financial companies in Nigeria. The research observed some lapses in both theory and practice and recommended ways of improvement. Specifically, the research brought out the deficiency in Syed's HR accounting disclosure index and recommended further research to improve the index. The research also observed the absence of a framework for auditing HR accounting. Therefore, the research recommended the development of an audit framework on HR accounting information and disclosure.

Implementing the recommendations of this research will strengthen the concept of HR accounting and boost the confidence of stakeholders in the ability of HR accounting disclosure to improve FR quality. The findings of this research will undoubtedly draw the attention of researchers and lead to more investigations into the relationship between HR accounting disclosure and FR quality, the problems of HR accounting in Nigeria, and ways to increase the rate of HR accounting adoption in Nigeria.

This research could be the first study on the effect of HR accounting disclosure on FR quality by using the qualitative characteristics of FR. The research has demonstrated that following the operationalisation of the qualitative characteristics of FR by Beest et al. (2009), it is possible to construct an FR quality index that will indicate the level of quality of a financial report. In addition to this, research has shown that it is possible to investigate the contribution of HR accounting to FR quality using an HR accounting disclosure index and an FR quality index. The findings from the study have shown that HR accounting disclosure contributes positively to improving financial reporting quality.

Contrary to many empirical studies, which found that the lack of an acceptable valuation model is the main problem of HR accounting, this study reveals that the fear of manipulation of HR accounting information by management and the lack of a specific auditing framework for HR accounting information is the important problems HR accounting faces in Nigeria. Therefore, apart from recommending harmonising valuation models on HR accounting and the issuance of accounting standards, this research suggests that there is a need to develop an audit framework and guidelines on HR accounting to boost stakeholder confidence.

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Appendices

1 Informed Consent

This questionnaire is for data collection in academic research on human resource accounting (HRA). The student researcher is soliciting for your cooperation towards answering the questions relating to the problems and challenges of HRA in Nigeria with emphasis on non-financial companies. You are selected to participate in this research because you are a member of a recognised professional accounting body in Nigeria. Although your participation is voluntary, it is very valuable in making the research a success. If you decide to participate in the research, the researcher assures you that the data you will provide will be anonymous, confidential and will only be used for this research. The result of the research can be shared with the participants upon request and may be used in academic or professional publications and presentation in conferences, seminars and workshops. Note that you are free to withdraw from the research at any time without giving any explanation and without any consequences. In this case, the researcher will trace and delete the data you provided. If you need more information or more clarifications on the research or the questionnaire, feel free to contact the researcher rabiuaminu2@gmail.com. Before proceeding to the next section by clicking on the "next" button, please tick the box below if you agree to participate in this research. *

☑ I consent to participate in this research voluntarily.

Name Date

2 Primary Data Collection Tool – Questionnaire

Section A

Instruction: *Please tick the appropriate response from the options provided and provide the number of years in question 3.*

Q1. Your affiliation to a professional accounting body in Nigeria.

a) Association of National Accountants of Nigeria (ANAN) ☐
b) Institute of Chartered Accountants of Nigeria (ICAN) ☐
c) Both ANAN and ICAN ☐

Q2. Which of the following descriptions suits your fulltime employment or engagement?

a) Accounting Theoretician (academics) ☐
b) Accountant in private practice (audit, consultancy) ☐
c) Accountant in public/private sector ☐

Q3. How long have you been in the above category of employment or engagement? (Number of years) ☐

Q4 Gender

a) Male ☐
b) Female ☐

Section B

The options of the following questions are: strongly agree (SA), Agree (A), Neutral (N), Disagree (D), and Strongly Disagree (SD).

Note that HRA stands for Human Resources Accounting.

From the following statements, please tick the option that matches your view most closely.

Q No.	Questions	Options				
		SA	A	N	D	SD
	Nature, characteristics and presentation of HRA					
1	Human resources are important assets to non-financial companies in Nigeria.					
2	The value of human resources should be reported in the annual financial reports of non-financial companies in Nigeria.					
3	The exclusion of human resources value from the financial reports of non-financial companies in Nigeria distorts the true and fair view of the reports.					
4	Providing information by non-financial companies in Nigeria on investment in and value of human resources will be useful for investment decisions.					
5	The voluntary disclosure of HRA information in the annual financial reports by non-financial companies in Nigeria improves the quality of their financial reporting.					
6	The monetary value of human resources of non-financial companies in Nigeria should be recognised in the statement of financial position (balance sheet) as asset/investment.					
7	The monetary value of human resources of non-financial companies in Nigeria should be presented in the notes to the accounts in the annual financial reports.					
8	The monetary value of human resources of non-financial companies in Nigeria should be presented in a separate HRA Statement in the financial reports.					
	Reasons for the exclusion of investment in human resources from the statement of financial position					
9	Under the conventional accounting method, investment in human resources is not recognised as an asset in the statement of financial position					
10	Lack of a generally accepted valuation method is the reason for the exclusion of human resources value from been included in the statement of financial position as an asset					
11	The monetary value of human resources should not be recognised in the statement of financial position (balance sheet) because it is a sensitive organisational data.					
12	The monetary value of human resources should not be recognised in the statement of financial position (balance sheet) because wages and salaries have been treated in the income statement as reward for labour.					
13	Inclusion of human resources value as an asset in the statement of financial position is meaningless because there is no active market for human resources.					
14	Recognising human resources as an asset in the statement of financial position will expose a business to its competitors.					

15	The financial position of a non-financial company may be misleading if the monetary value of human resources is treated as an asset.					
16	Shareholders and investors are not interested in the monetary value of human resources.					
	Major challenges of human resource accounting in Nigeria					
17	HRA is not fully adopted in Nigeria because of the absence of specific accounting standards.					
18	HRA is not fully adopted in Nigeria because of the uncertainty about the service period of human resources.					
19	HRA is not fully adopted in Nigeria because tax laws do not recognise human resources as an asset.					
20	Lack of universally accepted method of valuing human resources is the problem of HRA in Nigeria.					
21	Management may use HRA practices for manipulation of financial statements.					
22	Human resource accounting must be backed by a human resources audit for it to be transparent.					
23	There is a low level of awareness about HRA among stakeholders in Nigeria.					
24	Companies do adopt HRA fully because of the confidentiality attached to individual employees' records.					

Adapted from Bonsu et al. (2019) and Onyekwelu et al. (2015).

3 Details of Modifications to Adapted Questions

Questions No.	Adapted from	Modifications made
1	Onyekwelu et al. (2015), questions 9, 10 and 16.	The ideas in the 3 questions merged to form one question about how important HR is to non-financial companies.
2	Onyekwelu et al. (2015), question 7.	Question 7 was re-phrased to make its meaning clearer and to be in line with the current research.
3	Onyekwelu et al. (2015), question 9.	Question 9 was re-phrased to make clearer and to comply with the current research.
4	Onyekwelu et al. (2015), questions 8 and 9.	The ideas in questions 8 and 9 were combined to form new question 4.
5	Onyekwelu et al. (2015), questions 15.	Question 15 was restated to reflect FR quality as profitability and firm value have been positively associated with FR quality.
6	Onyekwelu et al. (2015), questions 7 and 18.	The ideas from the two questions were merged and re-phrased to reflect recognition of capitalized HR value in the FR.
7	Onyekwelu et al. (2015), question 7.	The question was expanded and restated to reflect disclosure of HR accounting information in the notes to FR.
8	Onyekwelu et al. (2015), question 7.	The question was expanded and restated to reflect disclosure of HR accounting information in separate HR accounting statement.
9	Onyekwelu et al. (2015), questions 3.	Questions 3 was restated to reflect how conventional accounting treats investment in HR.
10	Bonsu et al. (2019), Table 2, question 1.	The question was restated to clearly reflect absence of valuation model as a reason for not reporting HR value in the balance sheet.
11	Bonsu et al. (2019), Table 2, question 3.	The question was restated to make it clearer.
12	Bonsu et al. (2019), Table 2, question 2.	The question was restated to make it clearer.
13	Bonsu et al. (2019), Table 4, question 7.	The question is re-categorised from challenges of HR accounting to reasons for exclusion of HR value from the balance sheet and restated to make it more meaningful.
14	Bonsu et al. (2019), Table 2, question 5.	The question was modified to make it easier to be understood by the respondents.
15	Bonsu et al. (2019), Table 4, question 8.	The question is removed from one of the challenges of HR accounting to reasons for not recognising HR value in the balance sheet. The question is then re-phrased to make more meaningful and easy to be understood.
16	Bonsu et al. (2019), Table 2, question 6.	The question was restated to make it clearer.
17	Bonsu et al. (2019), Table 4, question 1.	The question was restated to make it clearer by clearly mentioning lack of standards as a challenge to HR accounting.
18	Bonsu et al. (2019), Table 4, question 2.	The question was restated to make it clearer by clearly mentioning the uncertainty about determining the service period of HR as one of the challenges of HR accounting.
19	Bonsu et al. (2019), Table 4, question 3.	The question is restated to make it clearer.
20	Bonsu et al. (2019), Table 4, question 4.	The question is restated to make it clearer.
21	Onyekwelu et al. (2015), question 11.	The question is restated to make it clearer.
22	Bonsu et al. (2019), Table 4, question 6.	The question is restated to make it clearer.
23	Bonsu et al. (2019), Table 2, question 6.	The question re-categorised from reasons for exclusion to a challenge of HR accounting and restated to make it clearer.
24	Bonsu et al. (2019), Table 2, question 3.	The question re-categorised from reasons for exclusion to a challenge of HR accounting and restated to make it clearer.

4 Secondary Data Collection Tool –

(a) Measurement of Human Resource Accounting Disclosure Using Index

S/N	Disclosure Items
1	Separate Human Resource Accounting Statement
2	Total Value of human resources
3	Number of employees
4	Human resource policy
5	Training and development
6	Management succession plan
7	Employment report
8	Employees' value creation
9	Human resource development fund
10	Employees/workers fund
11	Employees categories
12	Managerial remuneration
13	Retirement benefits
14	Performance recognition
15	Pension fund

Adopted from Micah et al. (2012)

(b) Operationalization and Measurement of Financial Reporting Quality

Question no.	Question	Operationalization	Score
Relevance			
R1	To what extent does the presence of the forward-looking statement help forming expectations and predictions concerning the future of the company?	No forward-looking information	1
		Forward-looking information not an apart subsection	2
		Apart subsection	3
		Extensive predictions	4
		Extensive predictions useful for making expectation	5
R2	To what extent does the presence of non-financial information in terms of business opportunities and risks complement the financial information?	No non-financial information	1
		Little non-financial information, no useful for forming expectations	2
		Useful non-financial information	3
		Useful non-financial information, helpful for developing expectations	4
		Non-financial information presents additional information which helps developing expectations	5
R3	To what extent does the company use fair value instead of historical cost	Only historical cost	1
		Most historical cost	2
		Balance fair value/historical cost	3
		Most fair value	4
		Only fair value	5
R4	To what extent do the reported results provide feedback to users of the annual report as to how annual report as to how	No feedback	1
		Little feedback on the past	2
		Feedback is present	3

	various market events and significant transactions affected the company?	Feedback helps understanding how events and transactions influenced the company	4
		Comprehensive feedback	5
Question no.	Question	Operationalization	Score
Faithful representation			
F1	To what extent are valid arguments provided to support the decision assumptions and estimates in the annual report?	Only described estimations Verifiability	1
		General explanation	2
		Specific explanation of estimations	3
		Specific explanation, formulas explained etc.	4
		Comprehensive argumentation	5
F2	To what extent does the company base its choice accounting principles on valid arguments?	Changes not explained Verification	1
		Minimum explanation	2
		Explained why	3
		Explained why + consequences	4
		No changes or comprehensive explanation	5
F3	To what extent does the company, in the discussion of the annual results, highlight the positive events as well as the negative events?	Negative events only mentioned in footnotes Neutrality	1
		Emphasize on positive events	2
		Emphasize on positive events, but negative events are mentioned; no negative events occurred	3
		Balance positive/negative events	4
		Impact of positive/negative events is also explained	5
F4	Which type of auditors' report is included in the annual report?	Adverse opinion	1
		Disclaimer of opinion material error, verification,	2
		Qualified opinion	3
		Unqualified opinion: Financial figures neutrality, and	4

		Unqualified opinion: Financial figures + internal control completeness	5
F5	To what extent does the company provide information on corporate governance?	No description CG Completeness,	1
		Information on CG limited, not in apart subsection	2
		Apart subsection	3
		Extra attention paid to information concerning CG	4
		Comprehensive description of CG	5
Question no.	Question	Operationalization	Score
Understandability			
U1	To what extent is the annual report presented in a well-organized manner?	Judgment based on:	
		- complete table of contents	
		- headings	
		- order of components	
		- summary/ conclusion at the end of each subsection	
U2	To what extent are the notes to the balance sheet and the income statement sufficiently clear?	No explanation	1
		Very short description, difficult to understand	2
		Explanation that describes what happens	3
		Terms are explained (which assumptions etc.)	4
		Everything that might be difficult to understand is explained	5
U3	To what extent does the presence of graphs and tables clarifies the presented information?	No graphs	1
		1-2 graphs	2
		3-5 graphs	3
		6-10 graphs	4
		> 10 graphs	5
U4	To what extent is the use of language and technical jargon in the annual report easy to follow?	Much jargon (industry), not explained	1
		Much jargon, minimal explanation	2

		Jargon is explained in text/ glossary	3
		Not much jargon, or well explained	4
		No jargon, or extraordinary explanation	5
U5	What is the size of the glossary?	No glossary	1
		Less than 1 page	2
		Approximately one page	3
		1-2 pages	4
		> 2 pages	5
Question no.	Question	Operationalization	Score
Comparability			
C1	To what extent do the notes to changes in accounting policies explain the implications of the change?	Changes not explained	
		Minimum explanation	
		Explained why	
		Explained why + consequences	
		No changes or comprehensive explanation	
C2	To what extent do the notes to revisions in accounting estimates and judgements explain the implications of the revision?	Revision without notes	1
		Revision with few notes	2
		No revision/ clear notes	3
		Clear notes + implications (past)	4
		Comprehensive notes	5
C3	To what extent did the company adjust previous accounting period's figures, for the effect of the implementation of a change in accounting policy or revisions in accounting estimates?	No adjustments	1
		Described adjustments	2
		Actual adjustments (one year)	3
		2 years	4
		> 2 years + notes	5
C4		No comparison	1

	To what extent does the company provide a comparison of the results of current accounting period with previous accounting periods?	Only with previous year	2
		With 5 years	3
		5 years + description of implications	4
		10 years + description of implications	5
C5	To what extent is the information in the annual report comparable to information provided by other organizations?	Judgment based on:	
		- accounting policies	
		- structure	
		- explanation of events	
		In other words: an overall conclusion of comparability compared to annual reports of other organizations	
C6	To what extent the company presents financial index numbers and ratios in the annual report?	No ratios	1
		1-2 ratios	2
		3-5 ratios	3
		6-10 ratios	4
		> 10 ratios	5
Question no.	Question	Operationalization	Score
Timeliness			
T1	How many days did it take for the auditor to sign the auditors' report after book-year end?	Natural logarithm of amount of days	
		1-1.99	1
		2-2.99	2
		3-3.99	3
		4-4.99	4
		5-5.99	5

Adopted from Beest et al. (2009)

5 UREC Provisional Approval

UNICAF UNIVERSITY

UREC's Decision

Name of Participant:	Rabiu Aminu
Title of the Research project:	Valuation, Recognition and Disclosure of Human Capital in Financial Statements of companies in Nigeria: Possibilities and Challenges.
Date:	29.03.2019

☐ **Approved** without revision or comments.

√ **Approved** with comments for **minor revision.**

☐ **Not approved** with guidance comments for moderate revision and resubmission.

☐ **Not approved** with guidance comments for major revision and resubmission.

Comments

1. Point 3a form the REAF form: principal investigator is the student, the student should print his name.
2. Point 3b form the REAF form: co-investigator is the supervisor, supervisors' name should be placed.
3. Point 10 from the REAF form: the student should change this process as it makes the participation in the research not anonymous hence the research should follow a different procedure. (i.e. contacting the secretary and asking her to distribute the questionnaire).
4. Point 11a: the student should delete the word "sane".
5. Point 11a form the REAF form: the student should remove any reference to verbal consent as the written consent is compulsory.
6. Point 12 from the REAF form: the participants have the right to be informed of the results therefore the student should rephrase and include also the fact that a debriefing form will be provided.
7. Point 14iii form the REAF form: the student should choose "YES".
8. The researcher must ensure participants that data will be kept for at least 5 years (Point 16, REAF form). Relevant document is updated on the VLE.
9. Remove from all documents any references to potential risks, hazards, psychological or physical harm.

The students' research project is approved by UREC with minor comments for revision.
The student can proceed with his research after the implementation of the above comments.

6

UREC Final Approval

UNICAF UNIVERSITY

UREC's Decision

Student's Name: Rabiu Aminu

Student's ID #: R1611D1985457

Supervisor's Name: Dr Olajide Solomon Fadun

Program of Study: UUM: PhD Doctorate of Philosophy - Accounting and finance

Offer ID /Group ID: O17033G16368

Dissertation Stage: 3

Research Project Title: Valuation, Recognition and Disclosure of Human Capital in Financial Statements of Companies in Nigeria: Possibilities and Challenges

Comments: Gatekeeper letter
Add the Research title in the first paragraph.

Questionnaire
For the on-line questionnaire please add information from the informed consent at the beginning and provide the option to sign the consent online.

Decision: B. Approved with comments for minor revision

Date: 16-Jul-2020

7

Gatekeeper Letter to ANAN

UNICAF UNIVERSITY

UU_GL - Version 2.0

Gatekeeper letter

Address: ANAN, Bauchi State Branch

Date: 23-Jul-2020

Subject: Request for Information for Research

Dear Chairman,

I am a doctoral student at Unicaf University Malawi, As part of the requirements for the award of the degree I am studying for, I am conducting a research on the prospects and challenges of adopting human resource accounting in Nigeria.

I am writing to request for your assistance in providing me with some information about the members of your association who are registered with your state branch, The information I need to enable conduct this research are:
1- Number of members in your branch
2- Email addresses, Whatsapp numbers or phone numbers (Whichever is available).

Subject to approval by Unicaf Research Ethics Committee (UREC) this study will be using online questionnaire for collection of primary data. I will use the email addresses, whatsapp numbers and phone numbers you will provide in sending a link to an online questionnaire to the members of your association, As participants in the research, the members will fill and submit the questionnaire online. I estimate that this process will not take more than 15 minutes.

In the event the branch cannot provide me with the email addresses or phone numbers, would you kindly assist me in forwarding the link to the online questionnaire to them?

This research which is on valuation, recognisition and disclosure of human capital in the financial statements of companies in Nigeria: possibilities and challenges is under the supervision of Dr Olajide Solomon Fadun, The research primarily focuses on determining the relationship between human resource accounting disclosure and quality of financial reporting in Nigeria; identifying the challenges facing the concept of human resources accounting and developing a valuation model for human resources,

Thank you in advance for your time and for your consideration of this project. Kindly please let me know if you require any further information or need any further clarifications.

Yours Sincerely,

Student's Name: Rabiu Aminu
Student's E-mail: rabiuaminu2@gmail.com
Student's Address and Telephone: 08066750743
Supervisor's Title and Name: Dr Olajide Solomon Fadun
Supervisor's Position: Supervisor
Supervisor's E-mail: o.fadun@unicaf.org

9

Gatekeeper Letter to ICAN

UNICAF UNIVERSITY

UU_GL - Version 2.0

Gatekeeper letter

Address: ICAN, Bauchi District Society

Date: 23-Jul-2020

Subject: Request for Information for Research

Dear Chairman,

I am a doctoral student at Unicaf University Malawi, As part of the requirements for the award of the degree I am studying for, I am conducting a research on the prospects and challenges of adopting human resource accounting in Nigeria.

I am writing to request for your assistance in providing me with some information about the members of your institute who are registered with your state district society. The information I need to enable conduct this research are:
1- Number of members in your district.
2- Email addresses, Whatsapp numbers or phone numbers (Whichever is available).

Subject to approval by Unicaf Research Ethics Committee (UREC) this study will be using online questionnaire for collection of primary data. I will use the email addresses, whatsapp numbers and phone numbers you will provide in sending a link to an online questionnaire to the members of your institute. As participants in the research, the members will fill out and submit the questionnaire online. I estimate that this process will not take more than 15 minutes.

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Thank you in advance for your time and for your consideration of this project. Kindly please let me know if you require any further information or need any further clarifications.

Yours Sincerely,

Student's Name: Rabiu Aminu
Student's E-mail: rabiuaminu2@gmail.com
Student's Address and Telephone: 08066750743
Supervisor's Title and Name: Dr Olajide Solomon Fadun
Supervisor's Position: Supervisor
Supervisor's E-mail: o.fadun@unicaf.org