

# Effect of Human Resources Accounting (HRA) Cost Information on Investment Decisions of Listed Assurance Companies in Nigeria

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## ABSTRACT

In the current era of information change, human resources accounting is an increasingly important part of an organisation's total wealth. It should form parts of the assets in the financial statements under the non-current assets. Thus, this study examines the effect of human resources accounting cost information proxied by training and development cost and personnel cost together with firm size (introduced as a control variable) on investment decision proxies using ROI of listed assurance companies in Nigeria. The ex-post facto research design was adopted with a population of 23 companies, of which 15 were sampled using purposive sampling techniques. Secondary data sources from annual reports of listed assurance companies in Nigeria ranging from 2013 to 2022 financial years were used. Panel regression analysis was used to analyse the result using E-views 10. The result of the study revealed that training and development costs had a positive and significant effect on the Return on investment of listed assurance companies in Nigeria. At the same time, personnel costs also had a positive and significant effect on the Return on investment of listed assurance companies in Nigeria. Based on this finding, it is recommended that assurance companies invest more in their employees' training and development and increase their staff welfare to enhance human capital efficiency.

**Keywords:** Human resources Accounting, Total training and development Cost, Personnel cost, investment decision. Return on investment, firm size.

## INTRODUCTION

In corporate organisations and entrepreneurial businesses, decision-making is a daily occurrence. Almost every decision must be considered in light of plans; it is rare to evaluate a course of action in isolation. According to Abdulai *et al.* (2020), most of the work done by managers, scientists, engineers, lawyers, accountants, and others who direct corporate organisations and structures is decision-making and problem-solving. Investment decision-making is a process that managers and individuals engage in daily to seize opportunities and address issues as they emerge. Abdulai *et al.* (2020) broadly categorise investment decision-making into two categories: programmed and nonprogrammed. To put it more concisely, Koontz and Weihrich (2010) suggested that making investment decisions involves premising, identifying alternatives, evaluating alternatives concerning the desired goal, and selecting the most effective option.

In order to secure success in terms of exceptional performance and ultimate survival in a highly competitive economic environment, businesses in the globalised world must make timely, effective, and efficient investment decisions, given the trend of operation and the rate of competition among them. If prompt and ongoing investment decisions are not made regarding the organisation's available resources, particularly its human resources, the going concern many business organisations long for may not be sustainable. It is

impossible to overstate the significance of human resources as a crucial component of an organisation's survival and success, alongside other resources like cash, machinery, and minutes (time). According to Bassey and Arzizeh (2012), many firms in the modern economy have recognised human resources as one of the primary sources of competitive advantage. Fariborz and Rajashekar (2011) state that an organisation's physical assets and investments are as important as its skilled and specialised human resources.

Human resources have long been understood to be an essential resource and a source of value for businesses. Experts assert that value creation is primarily driven by core competence, knowledge creation, innovation, and material and monetary resources. Businesses must use their workforce as a competitive weapon to gain a competitive edge, especially for start-ups and emerging enterprises. This is essential and significant for creating jobs and reviving the economy in developing nations like Nigeria. Increasing worker productivity has become a key strategy to drive higher company value. Through extensive human capital development programs, businesses aim to maximise their workforce to meet business objectives and ensure long-term viability and sustainability. Businesses must commit resources to this project to guarantee that workers have the competencies, knowledge, and skills necessary to function well in a rapidly changing work environment. According to Fajana (2015), current accounting practices treat human resources more like an expense than an investment. This could be the core of human resource accounting or human capital accounting for human assets.

To determine the effect of human resources accounting cost information on the investment decisions of insurance companies in Nigeria, human resources accounting cost information needs to be measured reliably through training and development costs, personnel costs, and return on investment. These must be correctly identified to provide an unbiased explanation. The management incurs training and development costs on training their human resources to ensure optimal organisational performance. Personnel costs are the salary, fringe benefits, and allowances paid to an employee monthly. Moreover, Return on investment is a performance metric used to compare the effectiveness of multiple investments or assess how successful an investment is. Despite the large investments made in hiring new employees and other related costs, human resources accounting costs still need to be properly classified as long-term assets in the income statements and financial positions under the normal financial reporting procedure and, hence, need to be effectively amortised. The traditional accounting practices in Nigeria need to pay more attention to the contribution of human resources accounting cost elements and their contribution to investment decisions of listed assurance companies in Nigeria. Fajana (2015) stated that financial statements under a traditional accounting system often reflect the use of materials and money but rarely include human resources' worth.

Several empirical studies have also been carried out on the effect of human resources accounting in Nigeria. Such studies include Akinlade and Adegbe (2020), Navulur (2019) and *Addina et al. (2019)*. To the best of the researcher's knowledge, none or fewer of these studies have considered the effect of human resources accounting on investment decisions of the listed assurance companies in Nigeria, resulting in institutional gaps. Moreover, previous studies conducted on human resources accounting and investment decisions have revealed mixed and inconclusive outcomes. While some studies like Ofurum and Adeola (2018), Nestor *et al.* (2017), and Amahalu *et al.* (2017) have always used Agency theory, resource-based view theory and human capital theory as underpinning theory, fewer studies have used decision-making Theory (Subjective Expected Utility Theory) as underpinning theory resulting to gaps in the literature. This position required more comprehensive studies that utilised a broader data set and timeliness than previous studies. The study's objective is to examine the effect of human resources accounting cost on investment decisions of listed assurance companies in Nigeria. The basic hypotheses underlying this study are stated thus.

**Ho1:** Training and development costs have no significant effect on Nigeria's Return on investment of listed assurance companies.

**Ho2:** Personnel cost has no significant effect on the Return on investment of listed assurance companies in

Nigeria.

## LITERATURE REVIEW

### Conceptual Framework

#### Human Resources Accounting (HRA) Cost Information

Human Resource is a term which describes the set of people who make up the workforce of an organisation or a business entity. Their activities are geared towards achieving the organisation's goals and objectives. It comprises the energies, skills, talents and knowledge of people producing goods or rendering relevant services. Any organisation's success depends on human resources' ability to effectively and efficiently optimise other resources of that entity, such as land, equipment and money; hence, human resources are the greatest assets at the disposal of any business or organisation. That is why the statement "our greatest assets are our people" is declared in most companies' annual reports. (Enofe et al., 2013, 7). According to (Gupta & C 2019, 71), Human resources is one of the most important resources of every organisation. However, in reality, it is neglected and not accounted for in the books of accounts, which means it is not considered when preparing the financial statement of organisations.

The Human Resource Accounting concept is well-digested once the definition has been well-defined and illustrated. These definitions should be from senior accounting practitioners, scholars, researchers, and others who are well-conversant with the subject and have practical experience. The modern definition has classified human resources as valuable assets rather than limiting profit expenditure costs. The concept is heavily borrowed from the human resources accumulation of employees' information about the dynamic working environments and the nomadic nature of how staff helps companies' decision-makers to make sound resolutions. Raghav (2011) defined human resources accounting as measuring tools designed for effective worker management and their significance as assets, while Parameswaran and Jothi (2011) stated the American Accounting Society Committee's definition of HRA as personnel resources measurement and information conveyed as part of the accounting of financial statements. The term can be defined based on the above descriptions, similar to human resources as assets in organisations for improved investment decision-making.

Human Resource Accounting cost information is "the process of identifying and measuring data about human resources and communicating this information to interested parties," according to the American Accounting Association's Committee (1973). Therefore, the measurement of all expenses or investments related to hiring, placing, training, and developing staff members is just one aspect of human resources accounting cost information. Another is quantifying and reporting people's economic value in an organisation's financial statements. Human resource accounting cost information aims to locate and document organisational investments in human resources not currently covered by standard accounting procedures. In essence, it is an information system that informs management about changes to the company's human resources over time and the cost and value of the human element to the organisation. In addition to giving management (internal users) pertinent data to support hiring, training, and other development decisions, the system may also benefit external users by giving information about the organisation's investment in and use of its human resources to lenders, investors, and other external users of financial statements.

#### Training and Development cost

Training is the formal, systematic alteration of behaviour through learning that results from development, instruction, education, and planning experience, according to Armstrong (2015). He states that the goal of training is to support the company in fulfilling its mission by enhancing the value of its most valuable

asset—its workforce. Armstrong (2015) further supports the idea that investing in training helps people perform better and maximise their innate skills. In agreement with Armstrong (2015) determined that the primary goal of training and development is to eliminate performance deficiencies that exist or are expected to arise and cause workers to perform below the expected level. Obi and Zakari (2005) cite Campbell (1971) as a source that separates training from development. He claimed that whereas development is longer-term, more comprehensive, and targeted at managerial staff, training is done for non-managers with a specific goal. According to Oke (2010), many businesses, particularly multinational corporations, rely on staff development to reach company goals and objectives.

According to Armstrong (2015), effective training programs help businesses reduce the cost of training employees, improve performance on an individual, team, and corporate level in terms of output, quality, speed, and overall productivity, increase operational flexibility by allowing employees to possess a wider range of skills (multiskilling), and draw in top talent by providing opportunities for learning and development. increase employee commitment by encouraging them to identify with the organisation's mission and objectives; raise employees' levels of competence and develop their skills, enabling them to obtain more job satisfaction, earn higher rewards, and advance within the organisation; support change management by raising awareness of the reasons for change and equipping people with the knowledge and skills they need to adapt to new situations; create a culture within the company that is focused on performance enhancement and improved customer service standards

### **Personnel Cost**

The money spent on employee benefits is known as the personnel cost. (Kaplan,2014) It is the entire amount of money paid by the employer to the worker for the duration of the reference period. This covers pay, taxes, employee social security contributions, and pensions. An organisation's workforce is a strategic asset that requires specific resource allocation to be maintained. Wages are based on productivity and usage; nonetheless, they are fixed and subject to periodic reviews. Wages and salaries are personal emoluments, and any additional income received only from employment, such as gratuities, allowances, superannuation, pension plans, and other ranks. Wages and salaries are personal emoluments, along with allowances, gratuities, superannuation, pension plans, and any other income received only from employment as other ranks.[Amended by s.2(c) of the PITA (Amendment) Act, 2011]3. Chargeable income Collins (2021): A person receives emoluments, money, or other forms of payment in exchange for their labour.

The compensation paid to an organisation's staff consists of salary and wages. Employee salaries and wages are normally given to them in cash or kind. According to Surbhi (2015), wages are payments made to labour hourly for the amount of work accomplished each day. In contrast, salary is a predetermined sum paid to employees regularly based on their performance/productivity. He continued by saying that those on salaries work in white-collar occupations, which indicates that they are highly educated, skilled, and have respectable social standing. Meanwhile, those receiving salaries work in blue-collar positions, which are semi-skilled or unskilled occupations where the employee is paid daily. According to Agburu (2012), wages and salaries are very important in Nigeria.

### **Investment Decision**

Making decisions is the process of choosing a course of action from a range of options, according to Koontz and Weihrich (2010). They went on to say that the foundation of planning is decision-making. This means that without a decision to commit money, direction, or reputation, a plan cannot be considered to exist. Managers typically view decision-making as their primary responsibility because they are always tasked with deciding what needs to be done, by whom, when, where, and sometimes even how. As a result, making decisions is a phase in the planning process. This is true even when the judgments are made hastily or have a short-term impact on actions. Making decisions is a daily occurrence for both individuals and business

organisations. Almost all decisions must be made in conjunction with other plans. Therefore, it is rare that a course of action can be evaluated in isolation. Simon *et al.* (1987) assert that decision-making and problem-solving constitute a major portion of the labour done by managers, scientists, engineers, lawyers, and others who direct society's direction and structure.

According to Mosley, Pietri, and Megginson (1996), decision-making is a process that managers and individuals engage in daily to seize opportunities and address issues as they emerge. However, they generally divided decision-making into two categories: planned and unplanned. Koontz and Weihrich (2010) state that making decisions entails premising, identifying options, assessing alternatives in light of the desired outcome, and selecting the option most effectively accomplishes the objective.

### **Return on Investment**

Return on Investment, ROI, is the money an investor in a business earns to inject financial capital. Any return is from the business's net profit and marks the efficiency of investing capital in the venture. Return on Investment (ROI) is among the most popular performance measurement and evaluation metrics. ROI analysis (when applied correctly) is a powerful tool for making informed decisions on acquiring information systems. ROI is a performance measure used to evaluate the efficiency of an investment or to compare the efficiency of several different investments. To calculate ROI, the net benefit (Return) of an investment is divided by the cost of the investment; the result is expressed as a percentage or ratio (Erdogmus *et al.*, 2014)

There are many other ROI definitions, each focusing on certain ROI aspects. With all the diversity of the definitions, the primary notion is the same: ROI is a fraction, the numerator of which is "net gain" (Return, profit, benefit) earned as a result of the project (activity, system operations), while the denominator is the "cost" (investment) spent to achieve the result. (Botchkarev, 2015)

### **Firm size**

The size of a company influences firm value once proper strategic tax planning exists. Corporate tax planning is a practice that involves proper skills and competencies. Hence, the size of a firm and its capacity in terms of the availability of human resources available to the firm is believed to influence the extent of tax planning practice directly (Nwaobia *et al.*, 2016). Salawu and Adedeji (2017) state that the board's effectiveness depends on size. This is because the size of the board influences the company's management policy. Ftouhi *et al.* (2014) and Nwaobia *et al.* (2016) argue that bigger firms can achieve better tax planning due to their available resources and incentives. Oeta *et al.* (2019) and Timothy *et al.* (2020) suggest a positive but insignificant relationship between firm size and firm value.

On the contrary, Nwaobia *et al.* (2016) showed a negative association between firm size and the value of a firm. This is because big size creates additional costs arising from diseconomies of scale. Firm size is proxied as the natural log of total assets.

### **Empirical Review**

Edet *et al.* (2021) examined the effect of human resources in accounting information systems on management decision-making in Seventh-day Adventist institutions in Eastern Nigeria. The constant changes in the domestic and international business environment have brought about great challenges to the management of business organisations. This study adopted a cross-sectional survey research design. The population of this study was 250 accounting officers (Management and General Administration) in the 24 entities. The sample size was a total enumeration of all the 250 employees. A structured and validated questionnaire was used for data collection. The response rate was 84.4%. Data was analysed using inferential statistics (simple linear regression analysis). The findings revealed that human resources in AIS



positively and significantly affect management decision-making in Seventh-Day Adventist Institutions in Eastern Nigeria. Based on the findings of this study, the study recommended that institutions should devote attention to factors that will promote human resource development in the institutions, as this is capable of contributing positively to the management of the organisation, which includes informed decision-making. The findings and recommendations of Seventh-day Adventist institutions may not apply to insurance companies due to differences in operating activities. Also, for this kind of study, secondary data should impact human resource accounting practices on decision-making in the organisation. Evidence from a Private Company in the Kurdistan Region of Iraq has been used instead of a subjective questionnaire.

Sania (2021) examined the impact of human resource accounting on organisations' financial performance in the context of SMEs. By presenting the details of HRA, the study identifies various dimensions of organisations' financial aspects, viz., human capital efficiency, organisation profitability, Return on asset, and return on equity. The study survey was designed with the aid of a questionnaire; the study collected required data from 268 responses from human resource and finance departments of SME firms and analysed the data using linear regression, and the result of ANOVA and coefficient values found that there is a positive significant effect of HRA on human capital efficiency, organisation profitability and Return on equity. The SME firms in Saudi Arabia are aware of the benefits of the organisation's HRA. This study recommends that SME firms, human resource departments, and managerial decision-makers understand the HRA concept and its usefulness in making a positive difference in their financial statements. The findings and recommendations that apply to SME firms may not be relevant to insurance companies. Also, secondary data should have been used instead of primary data for this study.

Khowanas *et al.* (2021) assessed the effect of human resources management skills on accounting information quality in the Kurdistan Public Sector; the article aims to measure the impact of human resources management skills on accounting information quality in the Kurdistan public sector. To enable the study to measure human resource management skills in public sectors in the Kurdistan region of Iraq, the researchers used five human resources management skills elements first is communication skill, second is flexibility skill, third is negotiation skill, fourth is ethical action skills, and fifth is compassion skill. To assess the current study, the researchers used a quantitative research method in the form of a survey. The questionnaire was randomly delivered to 84 administrative employees from several government departments in the Kurdistan region. The researchers, on the other hand, collected 78 completed questionnaires. The results showed that as for the impact of communication skills on accounting information systems was found the value of Beta is .632 with a significant level of .000. This indicated that the first research hypothesis is supported, which is that Communication skills as human resource management skills have a positive and significant influence on accounting information system. As for the impact of Flexibility skills on the accounting information system was found the value of Beta is .611 with a significant level of .000. This indicates that the second research hypothesis is supported, which is that Flexibility skills as human resource management skills have a positive and significant influence on accounting information system. As for the impact of Negotiation skills on the accounting information system was found the value of Beta is .642 with a significant level of .000. This indicates that the third research hypothesis is supported, which is that Negotiation skills as human resource management skills have a positive and significant influence on accounting information system. As for the impact of Ethical action skills on accounting information systems was found the value of Beta is .649 with a significant level of .000; this indicates that the fourth research hypothesis is supported, which is that Ethical action skills as human resource management skills have a positive and significant influence on accounting information system, and lastly, as for the impact of Compassion skill on accounting information system was found the value of Beta is .661 with significant level .000 this indicated that fifth research hypothesis is supported which is Compassion skill as human resource management skills has a positive and significant influence on accounting information system. The study, therefore, recommends including human resources costs in the public sector financial statements due to its significant impact. This study was carried out in a public sector using primary data, and as such, its

findings and recommendations may not be applied to insurance companies in Nigeria.

Onyekwelu and Ironkwe (2021) investigated human resource accounting and corporate financial performance of quoted insurance companies in Nigeria. The principal aim of our study was to examine the effect of human resource accounting (Human resource accounting disclosure Index, Training cost, Number of staff and Increment in staff salaries) on corporate financial performance (return on assets and return on equity) of insurance companies quoted on Nigeria Stock Exchange for the period 2012 to 2017. Secondary data of 12 quoted insurance companies were collected mostly from their website and the Nigeria Stock Exchange Port Harcourt office. A non-experimental causal (Ex post facto) research design was appropriately adopted to address the study's research objectives. The least square regression analysis, precisely the random effect model, was used (with the aid of E-views 10) to empirically answer eight research questions raised in the study. The results showed that disclosure of human resource accounting and training costs significantly affects Return on Asset and Equity positively. At the same time, several staff and increments in staff salaries have a statistically significant negative effect on Return on Assets. Based on these results, recommendations were given as follows, among others: Insurance firms should do more in terms of building the culture of capacity-building training, developing and motivating the personnel to put in their best for the financial growth of their organisations and enhancing their capacity to improve organisational performance and Insurance firms should increase their human resource accounting disclosure in other to increase stakeholders' confidence in doing business with them thereby improving its performance. This present study intends to introduce four proxies and the use of Return on investment to measure investment decisions. Return on investment should have been used instead of ROA.

Abdullahi *et al.* (2020) studied the impact of human resources accounting on investment decisions in Nigeria. Given the importance of human resources management in contemporary times, this study seeks to assess the impact of human resource accounting on investment decisions in Nigeria. Using the ordinary least square (OLS) log-linear multiple regression model, the study tested its hypothesis that human resource accounting is highly significant to investors and requisite stakeholders in making informed investment decisions. More so, including human resource accounting in financial reporting is desirable to aid the public in making rational decisions. The study, therefore, recommends that organisations should enhance the retention of education and training of staff to avert wastage of knowledgeable investment, and the company law should equally require companies to attach information about the value of human resources and the result of their performance during their accounting year. More robust data should have been collected for this kind of study and analysed using more advanced data analysis tools such as e-view or Stata.

Shakhawan (2020) evaluated the Impact of Human Resource Accounting on Performance Evaluation. The study employed a survey research design with a population of all listed financial institutions, out of which ten financial institutions were selected as a sample size. A Questionnaire was used as a means of data collection. The study found that human resources accounting has a positive effect on performance; the study concludes that human resources as evidence and their presentation in the financial statements have extensive implications and effects on the appearance of the company's business results with more credibility in a way that clarifies the real financial situation of financial institutions at the end of the year in a very accurate and objective manner. The study recommended that human resource costs be distributed over periods of utilising their services, noting the profits that will appear in the income items. For this type of study, secondary data should have been used instead of the questionnaire.

Bablu *et al.* (2020). Investigating the Impact of Human Resource Accounting Practice on Organisational Performance in Malaysia. This conceptual study aims to investigate the existing literature on the impact of human resource accounting on organisational performance and develop a framework that could benefit researchers, policymakers, and the investor community. This study uses a systematic review of literature that focuses on the impact of the factors that influence human resource accounting practice on organisational

performance. This systematic review aims to collect and summarise all empirical evidence from articles that fit the context of this study. The study's findings have been merged in a proposed framework with the help of the disclosure of human resource accounting and the use of intellectual capital accounting on organisational performance with the help of management support and employees' performance. The study found that human resources accounting has a significant positive effect on organisational performance. The study, therefore, recommends that management should take human resources as a critical asset of an organisation. The findings and recommendations that are applicable to companies in Malaysia may not be applicable to Nigerian companies due to different geographical locations.

Akinlade and Adegbe (2020) examined human resource accounting and the quality of financial reporting of quoted Oil and Gas Companies in Nigeria. Financial reporting is a veritable tool that provides information to all stakeholders for decision-making. The study investigated the effect of human resource accounting on the quality of financial reporting (using earnings quality, accounting conservatism, earnings smoothness and persistence as proxies) of quoted oil and gas companies in Nigeria. The study adopted an ex post facto research design. The population of the study was 12 oil and gas companies in Nigeria. A purposive sampling technique was used and considered 12 oil and gas companies that with secondary data information that covered ten years from 2004 -2018. The null hypothesis (H<sub>0</sub>): Human Resource Accounting does not have a significant effect on financial reporting quality in oil and gas companies in Nigeria. The empirical findings of financial reporting quality revealed that human assets provided the basis for these improvements in oil and gas companies with the results  $F(8,133)=65.13$  (P – value=0.000); Adjusted R<sup>2</sup> =0.315 and  $F(5,102)=217.6$  (P – Value=0.000); Adjusted R<sup>2</sup> =0.323. The study concluded that human resource accounting has a significant effect on the financial reporting quality of quoted oil and gas companies in Nigeria. The study recommended that the regulatory bodies find ways of rewarding companies that comply with the regulatory guiding standards and comply with information disclosure for earnings quality assessment and sanction erring companies that conceal relevant and purposeful information from the stakeholders. Due to institutional gaps and differences in operations, the findings and recommendations of oil and gas companies may not apply to insurance companies in Nigeria.

## **THEORETICAL FRAMEWORK**

### **Human Capital Theory**

Schultz's (1961) and Becker's (1964) studies have been used to understand this theory fully. It was conceived from the economics principles dealing with the quantitative personnel workforce. This theory stipulates that the investment in personnel by acquiring knowledge and skills through capacity building improves the performance of employees, raising their usefulness in an organisation. This usefulness increases their value and needs to be managed for continued investment in training and development. This is reflected in the individual's increased remuneration package. This explains the difference in wages for staff even in the same department, as they are compensated according to the highest level of education, training, skills and or relevant experience one possesses. Companies and organisations that pay well have a competitive advantage over others since they attract the best brains as staff feel well-remunerated and motivated, increasing their productivity levels and resulting in positive financial performance. The expenses are thus categorised as investments since the rewards to the company are felt on a longer timeframe.

Flamholtz (1999) differentiated between general and individual skills based on functionality. Even though general skills are common to many firms as they are mostly acquired through the general education systems, the specific ones are customised depending on the job being done. For example, management principles are almost the same in different firms, bringing about a competitive nature, while specific skills are only significant to one organisation. In his research, Becker (1964) reports a direct correlation between human capital investment and the organisations' production output. However, human labour is mobile; it cannot be



transferred from one individual to another; therefore, there is a need for continuous human capital development to yield improved results. This theory supports the

### **Stakeholders' Theory**

This theory was developed by Freeman (1984), who asserts that organisations are accountable to the shareholders and other company stakeholders, which is contrary to the belief that only the shareholders are the only stakeholders in a company. It also explains the tripartite relationship that exists in an organisation: agents (managers), principals (shareholders), and stakeholders (creditors, customers, suppliers' debtors). Moreover, it promotes a practical, efficient, effective, and ethical way to manage organisations in a highly complex and turbulent environment. Freeman (1984) defined stakeholders as individuals, groups, and organisations interested in the firm's processes and outcomes and upon whom the firm depends to achieve its goals. These are employees and managers, shareholders, financiers, customers, and suppliers involved in the firm's value-producing processes. These stakeholders may be called primary or legitimate stakeholders (Harrison *et al.*, 2010). Stakeholder theory suggests that "managing for stakeholders" involves attending to the interests and well-being of these stakeholders, at a minimum (Harrison *et al.*, 2010). Hence, other stakeholder groups, such as communities, special interest or environmental groups, the media, or even society, are included. This latter group, society, is a little difficult to comprehend regarding the core ideas of stakeholder theory because it is, from a practical perspective, impossible to determine what is in the best interests of such a vast and heterogeneous group. An interesting and important aspect of stakeholder theory is its comprehensive approach and advocates treating all stakeholders with fairness, honesty, and even generosity. This theory is very relevant to the study because it offers an opportunity to re-interpret various concepts, models, and phenomena across many different disciplines regarding the financial management practices and firm value of a company.

### **Decision-Making Theory (Subjective Expected Utility Theory)**

The decision-making theory is called the Subjective Expected Utility (SEU) theory. It was introduced by the US decision theorist Leonard J(immie) Savage (1917–71) in his book *The Foundations of Statistics* (1954), and in the same year, it was named and first studied empirically by the US psychologist Ward (Denis) Edwards (1927–2005). The theory postulates that the quality of human capital available in organisations reflects the quality of decisions and choices made, and such decisions ultimately influence organisational performance. The development of subjective expected utility theory (SEU) was a major intellectual achievement that gave a formal axiomatic statement of what it would mean for an agent to behave consistently and rationally for the first time. It assumed that a decision maker possessed a utility function, which is an ordering of all possible outcomes of choices by preference, that all alternatives among which choice could be made were known, and that the consequences of choosing each alternative could be ascertained (or in the version of the theory that treats choice under uncertainty, it assumed that a subjective or objective probability distribution of consequences was associated with each alternative). By applying subjectively assigned probabilities, SEU theory opened the way to fusing subjective opinions with objective data, which can also be used in man-machine decision-making systems. The assumption of SEU theory is very strong, permitting correspondingly strong inferences from them. Although the assumptions cannot be satisfied even remotely for most complex situations in the real world, they may be satisfied approximately in some microcosms – problem situations that can be isolated from the world's complexity and dealt with independently.

This study underpins decision-making theory simply because the theory explains the subjective expected utility, as used in decision theory, which refers to how appealing an economic opportunity is to a decision-maker when a risk is involved. It was encouraged and axiomatised to describe decision-makers' actions as relying on subjective expected utility. It has supporters of heroic tenacity, articulates some basic truth in

some circumstances, and is remarkably accurate in circumstances where its underlying logic is inappropriate.

## METHODOLOGY

This study adopts the ex post facto research design. It is an experimental study that examines the effect of human resources cost on investment decisions of listed assurance companies in Nigeria. It shows an empirical analysis of annual financial statements and accounts of all the 23 listed assurance companies on the Nigerian Exchange group. This study also requires the use of inferential statistics for data analysis as a result of the need to test hypotheses.

The population of the study covers all the twenty-three (23) listed assurance companies on the Nigerian Exchange Group. Ten years (2013-2022) were selected for the study to present a clear picture of the problem in a determinable period. The choice of 2013 is based on data availability to make the study timely and relevant to today's economic reality. The selection will be based on the following criteria:

- i. Availability of data
- ii. Any assurance companies that do not publish their financial statement online are excluded.
- iii. Stable board of directors throughout the years

### Technique for Data Analysis and Model Specification

Panel regression analysis was used in this study. The analysis employs descriptive statistics and correlation analysis to determine the strength of the linear association between Human Resources cost (HRC) elements on investment decision (ID) of listed assurance companies in Nigeria. The major reason for using regression and correlation analysis is to model, examine and identify the relationship between the formulated hypotheses and the independent variables.

The study adapts the approach of Abdullahi *et al.* (2020) with little modifications to determine human resources accounting cost elements. The model is stated below:

#### Model 1

$$ROI = \beta_0 + \beta_1 TDC + \beta_2 PC + \beta_3 FS + \epsilon_{it} \dots \dots \dots (i)$$

Where

$\beta_0$  = The autonomous parameter estimates (intercept or constant term)

$\beta_0 - \beta_3$  = Parameter coefficient of Human resources cost.

ROI = Return on Investment

TDC = Training and Development Cost

PC = Personnel Cost

FS = Firm Size

$\epsilon_{it}$  = Stochastic Error term

**A priori expectation:** This study envisages that human resources accounting costs have a positive effect on the investment decisions of listed assurance companies in Nigeria.

**Variable Measurement**

S/N	Variables	Measurement	Source
Dependent Variable			
1	ROI	Current value of investment/cost of investment	Abdullahi <i>et al.</i> , (2020)
Independent Variable			
2	TDC =	Total training and development Cost	Abdullahi <i>et al.</i> (2020).
3	PC Total salaries and wages cost		Abdullahi <i>et al.</i> (2020).
4	FIRM SIZE	Control Variable Natural logarithm of total assets	Uzoka <i>et al.</i> , 2020

**Source: Researcher Compilation (2024)**

**RESULTS AND DISCUSSION**

**Descriptive Statistics**

Descriptive statistics presents the mean, maximum and minimum values of variables applied together with their standard deviations obtainable. The Table below shows the descriptive statistics for the variables applied in the study. All variables were analysed using the E-view 10 software for the period under review.

**Table 1: Descriptive Statistics Result**

	ROI	TDC	PC	FSZ
Mean	0.202111	1.650008	5.6940925	7.462798
Median	0.196912	8.9857514	2.2005995	7.637787
Maximum	1.439452	8.991208	3.615608	8.921525
Minimum	-2.024934	-2228492.	5.55806.0	4.758056
Std. Dev.	0.418969	1.974308	8.0031696	0.995492
Skewness	-1.168590	1.471807	2.054289	-1.025777
Kurtosis	8.002995	4.651026	7.099349	3.570001
Jarque-Bera	190.5773	71.19217	210.5317	28.33608
Probability	0.000000	0.000000	0.000000	0.000001
Sum	30.31669	2.477610	8.544509	1119.420
Sum Sq. Dev.	26.15468	5.771218	9.547817	147.6596
Observations	150	150	150	150

**Source: E-View 10 Output (2024)**

Table 1 presents descriptive statistics on the effect of human resources accounting costs on investment

decisions of listed assurance companies in Nigeria from 2013 to 2022. The Table shows that Return on investment (ROI) as a measure of investment decision has a mean of 0.202111 with a standard deviation of 0.418969, a minimum value of -2.024934, and a maximum value of 1.439452. Although the range between the minimum and maximum is wide, it implies a stable return on investment, as the standard deviation indicates no wide dispersion of the data from the mean value. For the other measure of human resources accounting cost, Training and development cost (TDC), and Personnel cost (PC), Table the shows a mean value of 1.650008 and 5.6940925 with a standard deviation of 1.974308 and 8.00316 with minimum values of -2.4500 and -55.9700 with maximum values of 80.65000 and 8.0031 respectively. This implies that the human resources accounting cost in terms of training and development cost and personnel cost witnessed a substantial increase during the study period, as the standard deviation is so large compared to the mean and there is a huge range between the minimum and maximum values. The kurtosis value measures the peakness and flatness of the distribution of the series. If the Kurtosis value is less than 3, it means the distribution of the variable is normal, but when it is more than 3, the distribution of the variable is said to be abnormal.

## Correlation Matrix

### Correlation Analysis

Table 4.2 presents correlation values between dependent and independent variables and the correlation among the independent variables. These values are generated from Pearson Correlation output. The Table contains a correlation matrix showing the Pearson correlation coefficients between the dependent and independent variables and among the study’s independent variables. Generally, a high correlation is expected between dependent and independent variables, while a low correlation is expected among independent variables.

**Table 2: Correlation Matrix**

Covariance Analysis: Ordinary

Date: 12/10/23 Time: 23:00

Sample: 2013 2022

Included observations: 150

Correlation Probability	ROI	TDC	PC	FSZ
ROI	1			
	—			
TDC	0.046661	1		
	0.5707	—		
PC	0.005803	0.774231	1	
	0.9438	0	—	
FSZ	0.039238	0.672994	0.634767	1
	0.6336	0	0	—

**Source: E-View 10 Output (2024)**

The person correlation coefficient (r) was employed to establish the measures of associations between the variables. The Table above shows the person correlation coefficient and the respective probabilities of the



relationship between human resources accounting cost variables (TDC, PC and FS) and investment decision variables (ROI). The results show that the correlation coefficient between ROI and TDC stood at 0.046661, positively correlated. This implies that an increase in ROI would lead to a substantial increase in TDC. This is supported by its p-value, which is 0.5707, stating that the correlation is insignificant at 5.7%. The correlation coefficient between ROI and PC stood at 0.005803, which is equally positive. This implies that an increase in ROI would lead to a substantial increase in PC. Furthermore, the correlation coefficient between ROI and FS stands at 0.039238, which is positive at 3.9%. The above result confirms that training and development costs and personnel costs have a strong positive correlation.

**Diagnostic Test (Multicollinearity)**

In order to validate the robustness of the estimates, the multicollinearity test was conducted, using the Variance Inflation Factor (VIF) as a diagnostic check. Multicollinearity happens when one or more of the independent variables exert superior influence on the others, and this position is a violation of the assumptions for linear regression modelling, so it can impact the validity of the results from the analysis.

**Table 3: Multicollinearity Test (VIF) Result**

Variance Inflation Factors

Date: 12/10/23 Time: 23:06

Sample: 2013 2022

Included observations: 150

Variable	Coefficient Variance	Uncentered VIF	Centred VIF
C	0.113157	95.22483	NA
TDC	8.95E-20	4.940748	2.895447
PC	4.96E-19	4.004994	2.653015
FSZ	0.002345	111.8422	1.942510

**SOURCE: E-VIEW 10 OUTPUT (2024)**

\* Decision rule: A centred VIF of less than 10 is an indication of the absence of multicollinearity, while a centred VIF of more than 10 is an indication of the presence of multicollinearity.

The Table above clearly shows the absence of multicollinearity among the independent variables, given that all the independent variables (TDC PC and FS) have a centre VIF of less than 10.

**Robustness Test (Heteroskedasticity Test)**

A heteroskedasticity test was performed as a diagnostic check to verify the robustness of the estimates. Heterogeneous variance occurs when the standard error of the variable being monitored is not constant over time. Heteroscedasticity violates linear regression modelling assumptions and can affect the validity of analytical results. On the other hand, heteroscedasticity does not cause any bias in the coefficient estimates, but it reduces the precision, and less precise coefficients are more likely to be estimated. The estimates are far from the correct population values that have been removed.

\*Decision Rule: At a 5% level of significance

Hypothesis

**H<sub>0</sub>**: The Error Variances are all Equal (Homoskedastic)

**H<sub>1</sub>**: The Error Variances are not Equal (Heteroskedasticity)

**Table 4.4 Heteroskedasticity Test**

Panel Cross-section Heteroskedasticity LR Test

Null hypothesis: Residuals are homoskedastic

Equation: EQ01

Specification: ROI C TDC PC FSZ

	Value	df	Probability
Likelihood ratio	71.57846	15	0.0000

**SOURCE: E-VIEW 10 OUTPUT (2024)**

Table 4.4 shows the results of the panel cross-section Heteroskedasticity regression test. The decision rule for the panel cross-section Heteroskedasticity test is stated above.

From the result in Table 4 above, with a ratio value of 71.57846 and a corresponding probability value of 0.0000, which is less than 5%, the study, therefore, posits that there is every reason to reject the null hypothesis, while the alternative hypothesis, that states there is conditional Heteroskedasticity problem is accepted. Consequently, based on the diagnostic probability of 0.0000, the null hypothesis is rejected; thus, there is conditional heteroskedasticity, indicating that residuals are heteroscedastic and, as such, the samples did not give a true reflection of the population. This is corrected by logging the dependent variable as an independent variable to correct the presence of heteroscedasticity.

**Hausman Test**

The Hausmann specification test is a model specification test used in panel data analysis to select between fixed and random effects models. Because the datasets utilised in this investigation were panel, both fixed and random effects regressions were performed. A Hausman specification test was then used to choose between the fixed-effects and random-effects regression models. This test determined if the error term was connected to the regressor. As a result, the decision rule for the Hausman specification test is presented at a 5% level of significance:

**H<sub>0</sub>**: Random effect is more appropriate for the Panel Regression analysis

**H<sub>1</sub>**: Fixed effect is more appropriate for the Panel Regression analysis

As previously stated, the null hypothesis is rejected if the p-value is larger than 0.05. According to the null hypothesis, fixed effects are best suited for panel regression analysis (that is, the preferred model is the random effects). Similarly, the null hypothesis is accepted if the p-value is less than 0.05. As a result, fixed effects are best suited for panel regression analysis (meaning we reject the random effects model).

**Table 4.5: Hausman Specification Test**

Correlated Random Effects – Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.583256	3	0.205

**SOURCE: E-VIEW 10 OUTPUT (2024)**

The result of the Hausman test appended in the Table above does not provide sufficient evidence to reject this null hypothesis at a 5% level of significance, as it can be seen that the probability value (0.2050) of the test is greater than the critical value of 0.05. Therefore, the study upholds that the difference in coefficients is not systematic; hence, the random effect model is the more appropriate for the study.

**Breusch-Pagan and Lagrangian Multiplier Test**

The Lagrange multiplier test selects between pooled and random effects models in panel data analysis. Because the dataset was a panel, both pooled, and random effects regression analyses were done. The optimum model among the pooled-effects and random-effects regression models was then determined using a Breusch-Pagan Lagrangian multiplier test. At a 5% significance level, the decision rule for the Breusch-Pagan Lagrangian multiplier test is stated thus:

**H<sub>0</sub>**: The pooled effect is not appropriate for the Panel Regression analysis

**H<sub>1</sub>**: Random effect is most appropriate for the Panel Regression analysis

As previously stated, if the p-value is less than 0.05, the decision rule is to reject the null hypothesis, which states that the pooled effect is most appropriate for the Panel Regression analysis (meaning that the preferred model is random effects). Similarly, suppose the p-value is greater than 0.05. In that case, the decision rule is to accept the null hypothesis, which states that the pooled effect is most appropriate for the Panel Regression analysis (meaning that the random effect model is to be rejected).

**Table 4.6: Breusch-Pagan Langranger Multiplier Test**

Residual Cross-Section Dependence Test

Null hypothesis: No cross-section dependence (correlation) in residuals

Equation: Untitled

Periods included: 10

Cross-sections included: 15

Total panel observations: 150

Note: non-zero cross-section means detected in data

Cross-section means were removed during the computation of correlations

Test	Statistic	d.f.	Prob.
Breusch-Pagan LM	141.1725	105	0.0107

**SOURCE: E-VIEW 10 OUTPUT (2024)**

Based on the probability value of the Breusch-Pagan Langranger Multiplier Test at 0.0107, the null hypothesis is rejected. Thus, the random effect is more appropriate than the pooled effect.

### Test of Research Hypotheses

**Ho1:** Training and development costs have no significant effect on the Return on investment of listed assurance companies in Nigeria.

**Ho2:** Personnel cost has no significant effect on the Return on investment of listed assurance companies in Nigeria

### Table 4.7: Random Effect Regression Result

Dependent Variable: ROI

Method: Panel EGLS (Cross-section random effects)

Date: 12/10/23 Time: 23:20

Sample: 2013 2022

Periods included: 10

Cross-sections included: 15

Total panel (balanced) observations: 150

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.784383	0.168922	4.64347	0
TDC	3.000381	0.027994	0.01361	0.0292
PC	2.027738	0.025841	1.07337	0.0355
FSZ	-0.072892	0.035659	-2.0442	0.0434
LOGROCE	0.251492	0.014156	17.766	0
Effects Specification				
			SD.	Rho
Cross-section random			0.03483	0.0789
Idiosyncratic random			0.11902	0.9211
Weighted Statistics				
R-squared	0.776319	Mean dependent var	0.27777	
Adjusted R-squared	0.767878	SD dependent var	0.24504	
SE of regression	0.118416	Sum squared resid	1.48637	
F-statistic	91.97205	Durbin-Watson stat	1.7547	
Prob(F-statistic)	0			

### SOURCE: E-VIEW 10 OUTPUT (2024)

Table 4.7 shows the panel random regression results of the explained variable proxied by ROI and the explanatory variables TDC, PC and FS. Between the  $R^2$  and the adjusted  $R^2$ , there is a range of values of 77% and 76%, respectively. The variation in the dependent variable (ROI) due to change in the independent variables is explained by the  $R^2$  of 77%. Therefore, it can be concluded that the independent variables have a combined predictive power to influence the investment decisions of listed assurance companies in Nigeria,



with the remaining 23% being explained by other factors not included in the model. The likely explanation of other factors in the researcher's opinion is majorly Technology. This is so because technology has become pivotal in the success of any business. This is aside other operational and or regulatory cost like statutory reserves mandated by regulatory authorities.

Furthermore, the regression results, as presented above, reveal an intercept of 0.784383, which is positive. This simply implies that when another variable is held constant, the investment decision of listed assurance companies increases by 0.784383. The result of the constant is statistically significant, as indicated by a P-value of 0.0000.

Table 4.7 describes that the coefficient of the variable TDC was 3.000381 with a p-value of 0.0292 ( $<0.05$ ). It can be deduced that training and development cost has a positive and significant effect on the investment decision of listed assurance companies, which provides support for the alternative hypothesis.

Also, the second hypothesis revealed that the coefficient of the variable PC was 2.027738 with a p-value of 0.0355 ( $<0.05$ ). It can be deduced that personnel cost has a positive and significant effect on the investment decision of listed assurance companies, which provides support for the alternative hypothesis.

Finally, it can also be deduced that the control variable (firm size) has a negative and statistically significant effect on the investment decision of listed assurance companies.

## DISCUSSION OF FINDINGS

As explained above, the study's result indicated that training and development costs positively and significantly affect the Return on investment of listed assurance companies in Nigeria. This suggests a significant relationship between human resources accounting cost information and investment decisions. The study is in tandem with the findings of Edet *et al.* (2021) and Onyekwelu and Ironkwe (2021). In a ten-year scope, 15 insurance companies committed at least 1.65 billion naira to training and development alone, as revealed in the descriptive statistics. The result seeks to validate the importance of Human Resources in the Insurance Industry. Simply put, Human resource in the insurance industry needs to be skilled and trained effectively, as the study has demonstrated.

The annual reports of insurance companies do not reveal the nature of training that the companies invest in but Nick Bondaug-Winn (2023) identified seven elements that would indicate that an insurance training programme is strong enough to include trainings on; Mentorship, Understanding the basics of insurance, sales techniques, relationship building skills, technology proficiency, regulatory knowledge, and negotiation skills. It is also likely that analytical and presentation skills are key.

However, the study disagrees with the findings of Abdullahi *et al.* (2020). This is probably because of the difference in methodology and scope. It is simply evident from the findings that personnel cost has a positive and significant effect on investment decisions made in the insurance business.

This study is also in congruent with the study of Akinlade and Adegbie (2020) but negates the study of Shakhawan (2020). This difference may be explained by the difference in methodology and scope, especially with the introduction of a control variable, Firm Size, that has helped to stabilize the data.

The research outcome, however, agrees with the apriori expectation.

## CONCLUSION AND RECOMMENDATIONS

The study analysed the effect of human resources accounting (HRA) cost information on investment

decisions of listed assurance companies in Nigeria. Based on the study findings reached through the study objectives guided by the study hypotheses, the study affirmed that training and development cost has a positive and significant effect on return-on-investment decisions while personnel cost also has a positive and significant effect on the return-on-investment decision of listed assurance companies in Nigeria.

Based on the findings of this study, the following recommendations are made for efficient investment decisions of listed assurance companies in Nigeria.

1. Based on this finding, assurance companies should invest more in the training and development of their employees to increase their human capital efficiency.
2. The study recommended that assurance companies improve their staff's welfare to increase their efficiency and productivity.

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