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Original Research Article

Expenditure in Human Resource and Financial Performance of Quoted Manufacturing Companies in Nigeria

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Abstract: Despite the philosophy in the conventional economics literature about the importance of human resource in the equation of value creation, human resource has been largely relegated to the bottom in the entire valuation of business model elements. Hence, the nexus of expenditure in human resource to financial performance of business entities in Nigeria is still empirically unclear. Thus, the researcher aimed to evaluate the influence of expenditure in human resource (EHR) on financial performance of quoted manufacturing companies in Nigeria. Salaries, wages, allowances (SWA), other staff related expenses (OSRE,) and human resource efficiency (HRE) are adopted as proxies for expenditure in human resource, accounting based profitability represented as return on equity (ROE) and capital market performance denominated into market value performance of firms (MVP) were proxies for financial performance. Causal comparative and descriptive research designs were adopted in the operational method for estimating the test results of the four hypotheses of the study. Result of the multivariate econometric regression demonstrated a mixed findings at varying magnitudes of significance. Besides statistically significant P-values for SWA and OSRE in hypothesis one, SWA demonstrated significant positive unstandardized beta coefficient contribution while HRE in hypothesis four indicated insignificant but positive unstandardized beta coefficient. Hence, the null hypotheses were rejected in the analysis. However, main predictors of focus were not adequately statistically significant in hypothesis two and three, thus, their null hypotheses were not rejected. Borrowing further interpretation of the empirical result from the explanatory credence of extant accounting literature, the researcher concluded that expenditure in human resource (EHR) among quoted manufacturing companies in Nigeria is positively associated with their financial performance. Such companies were therefore recommended to adopt reasonable salaries, wages, and allowances as well as reporting same as a competitive strategy for improving financial performance. They were also implored to engage in other staff related expenses as strategy for attracting and retaining high quality workforce. Last but not the least, the researcher suggested that regulatory authorities should make human resource efficiency as contained in the VAIC model to rank as a compulsory accounting ratio to be disclosed by quoted manufacturing companies in Nigeria.

Keywords: Expenditure in Human Resource, Human Resource Efficiency, Salaries Wages and Allowances, Other Staff Related Expenses, Financial Performance, Manufacturing Companies, Nigeria.

1. INTRODUCTION

In the equation of a firm's value creation and financial performance, human resource (HR) fundamentally ranks as the one of the critical success factors in the mix of business model elements. It is also referred to as human capital (HC) or human factor (HF). The conventional economics moreover describes human resource as the translating and coordinating effort which drives other resources towards efficient attainment of the organizational goals (Obulor & Ohaka, 2020). Over the years and unfortunately, the value of HR has not only consistently failed recognition as a component of assets disclosed in the statement of financial position but also appears to be grossely ignored by many organisations. Nonetheless the poor rating and non-inclusion of human resource as

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unintended ignorance in the books of account, almost all financial performance indicators of business entities are generated from interplay of business activities and engagements articulated, deliberated, decided, implemented, evaluated, and reported by human element. Unfortunately, favourable business outcome are rarely credited to value and contributions of the workforce in related reports, while human factor is often blamed for business failure and poor performance.

The economic shift in the business operational landscape, from production and competition largely benchmarked on availability and accessibility of materials to efficient value chain and supply chain management necessitated a corresponding shift in strategy from physical assets to intellectual assets and resources. This has resulted to a revaluation of business model elements on the basis of knowledge scaling. Ranking as one of the components which the accounting literature identifies as intellectual capital (IC), human resource or human capital is the catalyst for value creation in the current knowledge intensive economy. IC is the main reality that drives productivity in any firm. However, intellectual capital is largely located and hidden in the stock of human resource more than any other organizational element or resource. The knowledge in human resource explains what firms do, how it is done, and why it is done using a particular method.

HR is therefore a set of individuals comprising the leaders, strategists, and workforce of an organization or a business entity. According to Olayiwola (2016), HR is basically the agglomeration of all the skills, experiences, potentials and capabilities at the disposal of business establishments. American Accounting Association (1973) as cited in Amahalu, Obi, Abiahu, and Okika (2016) refers to the process of identifying and measuring data about human resources and communicating same information to interested parties as human resource accounting.

According to Flamholtz & Lucey (1981) however, all costs which are purposively allocated to induce, motivate, train, and retain desired stock of human capital in an organisation constitute expenditure in human resource (EHR), which are committed in anticipation of greater financial returns. Effiong (2010) further defined EHR as an accounting practice purported to quantify the value of employees in financial statistics. It is also the cost incurred for sustaining and improving the ability and effort of the workforce, (otherwise known as human resource efficiency - HRE) or human capital efficiency- HCE for the purpose of generating greater economic benefit for their organisations. Moreover, HRE is a components for measuring intellectual capital (IC). Drawing from the foregoing definitions, expenditure in human resource is herein speculated to improve financial performance of business organisations. Such *apriori* position is however derived from popular theoretical believe in the sphere of management sciences and humanities about HR.

Meanwhile, financial performance is a general measure of the overall monetary and financial health of a business organization over a specific range of time. It can be internally computed using accounting data as the indices or externally determined using capital market indices. Given the assumption that some investors and management regard the financial health of a firm as the ultimate objective, achieving such objective through efficiency in the application of different assets (especially human knowledge and skill) seem paramount. Therefore, investors and management may need to understand the implication of expenditure in human resource for enhancing organizational efficiency of human resource on the long-term financial performance. A pilot survey of Human Resource Managers in Nigeria revealed the unenthusiastic posture of many of them about spending and investing on the workforce for better overall performance. Perhaps, such posture is benchmarked on popular assumption that the supply of labour by far outweighs its demand in the country, which is oftentimes an opinion devoid of detailed analysis about the distinct qualities and productivity of employees. Thus, the managers may have not seen the business value relevance of attracting, improving, and retaining high quality labour force.

Unfortunately, human resource as the productive effort and entrepreneurial skills which are the core strategic resource that drives value creation has consistently failed the asset recognition tests of most financial reporting frameworks. For instance in the framework of the International Accounting Standards Board (IASB), asset is defined as a resource controlled by an entity which arise from their past events and from which future economic benefits are expected to accrue to the entity (Mirza, Orrell, & Holt, 2008). Infering from the framework, human resource at the disposal of firms is almost a component of assets immediately after the past event of recruitment, if not for dissenting clause also highlighted in the International Accounting Standards (IAS) 38 which only recognises intangible resource as asset, if it is identifiable in, controllable by, and expected to contribute future economic benefit to the organization. The dissenting position was further accentuated by some researchers like Inua and Oziegbe (2018) that any resource which must qualify as asset should be immobile, fully, and exclusively deployed for use only in one organisation. Thus, the issue of controllability in relation to human resource is still a grey area that requires clearer definition by accounting standards. Therefore, introducing controversy into the idea of almost rationalizing its information in the statement of financial position as part of assets. While some researchers are not only generalizing that human resource management is value relevant for enhancing business performance in the current information and

knowledge driven economy (Edvinsson & Sullivan, 1996; Bontis, 2003); they are also arguing that it is specifically strategic in attracting and retaining highly talented workforce in a corporate setting (Mouritsen, Bukh, & Marr, 2004). In a divergent study of about 1000 companies from 47 countries, Pricewaterhouse-coopers did not establish any association between human resource assets and the business bottom line (Gadzar, 2007).

Wagner (2007) observed that human resource is one of the intangible assets that attracts investors' attention while considering investment options. Moreover, it is rational and reasonable for investors to be interested in the capacity of human resource in readiness to mitigating the often volatile nature associated with business environment. Such proactive behaviour by investors is aimed to reduce what is termed risk of uncertainty by Eisenhardt (1989), who argued that investors focus on the future outlook and benefit of information in the annual financial report of companies. Unlike tangible assets fortunately, human resource may improve over time with increase in use. So, the observation in Jordan by Bontis (2001) to be trailing stock prices from financial market participants whenever there are changes in chief executives and other top managers (human resource not recognized in the financial statements as assets) seems a market recognition and reflection of the value in human knowledge, skills, and expertise.

Nevertheless, most organizational cost reduction strategies for competitive advantage in the marketplace often begin with the human resource at the expense of their development, valuation, compensation, and capitalization as better competitive strategy. Perhaps, due to the traditional hire and fire philosophy of the arm-chair managers in the old paradigm of business competition benchmarked on the sophistication of equipment and materials management. With almost zero information asymmetry and globalization in the new paradigm, the competition model is shifting towards the quality of workforce firms are able to attract, invest in, and retain. Thus, incurring expenses for such concern appears value relevant in relation to corporate financial performance.

In consonance with dearth of studies in this subject area, the effect of expenditure in human resource on financial performance of quoted manufacturing firms in Nigeria is still empirically unclear and controversial among available ones. A number of empirical researches conducted on the nexus between EHR and financial performance of firms in the past few decades across different industries around the world yielded mixed, inconsistent, and inconclusive results. For instance, empirical investigations by Amin, Aslam, and Makki (2014) among pharmaceutical firms in Pakistan, Salman, Mansor, Babatunde, and Tayib (2012) in the manufacturing sector of Nigerian economy, Khan, Khan, and Khan (2012) in the manufacturing sector of Taiwan, Al-Shubiri (2013) in Jordanian industrial sector and so on resulted into positive association between EHR and the financial health of business entities denominated into value of firms, productivity, and profitability. Whereas related studies by Yusuf (2013) in the banking sector of Nigeria and Lina (2014) among listed firms in Indonesia indicated negative correlation between EHR and financial performance of business entities; Firer and Williams (2003) also observed negative relationship between value of human resource (HR) and market value but no association between HR and profit of companies in South Africa. Moreover, the current researchers could not identify any study on the comparative influence of EHR on accounting and capital market measures of financial performance in the review of related literature. EHR may not only influence the behavioural pattern of capital market investors, but also those of customers, employees, creditors among other stakeholders. Therefore, the subject-matter is topical and still requires wider spectrum of research. More so, in reaction to intense market competition in service delivery, commodity, and capital market occasioned by globalization and rapid technological innovations, which are further exacerbated by a paradigm shift in the global business system from mass production-based economy to higher order information and knowledge-based one.

In congruence with the popular apriori expectation nevertheless, the researchers also speculates that the quality of expenditure in human resource of manufacturing firms may be capable of enhancing their financial performance. While expenditure incurred on human resource and human resource efficiency (HRE) are adopted as proxies for expenditure in human resource, accounting based profitability represented as return on equity (ROE) and capital market performance denominated into market value performance of firms (MVP) are proxies for financial performance. Expenditure in human resource is further decomposed into salaries wages and allowances (SWA) and other staff related expenses (OSRE). However, there are possible variables other than the primary independent proxies with capacity to influence the behavioural pattern of ROE and MVP. Examples of such variables are total assets (TA), sales turnover ratio (STR), and leverage ratio (LR) for ROE and market capitalization (MCAP), earnings per share (EPS), and dividend paid (DIV) for MVP.

2. Empirical Literature, Theoretical Background, and Hypotheses Development

Empirical Literature

As an emerging area of accounting research especially in developing economies like Nigeria, empirical Studies are still scanty but gradually on the increase about the interaction between expenditure in human resource and financial performance of business

organisations. Besides seeming controversy among researchers on the business value relevance of engaging in such practice and disclosing human capital in the annual financial report, there are also dissenting opinions about its measurement, type of expenditure and corresponding type of book entry. Nonetheless this dearth of empirical investigation on the subject-matter, the current researchers however reviewed a number of related literature.

In a study conducted to x-ray the concept in different parts of the world, Vafaei *et al*. (2011) investigated human resource accounting disclosure among 220 listed companies in Britain (58), Hong Kong (49), Singapore (50, and Australia (63) for 2005 and 2006. Adopting ex-post facto research design and content analysis of annual financial reports, the researchers assessed the extent of human resources reporting and the contribution of such disclosure to share prices of listed business entities. The result of their multiple regression indicated that human resource accounting disclosure is significantly positive with market price of shares in Britain ang Hong Kong companies, but insignificant among companies in Australia and Singapore. The researchers therefore contended that the relevance of textual disclosure of intellectual capital information for investors and securities analysts is dependent on other country-specific factors.

A conceptual study by Abhayawansa and Abeysekera (2008) on human resource accounting disclosure adopted exploratory research design through theoretical review of intellectual capital disclosure (ICD). The aim was to ascertain the extent of HC disclosure among Canadian companies, besides the use of such information for capital market analysis. Leveraging on the explanatory power of resource-based view, the researchers found that Substantial ICD literature conceptualised HC through human capital theory as a conglomeration of knowledge and competences of individual employees and the entire workforce of a business firm. However, the result indicated low disclosure scores for HC in comparison to external and internal capital disclosures; which did not portray HC in the light that is useful to the capital market. Hence, practical Guidance was provided for operationalizing future HCD and ICD studies to reveal the potential of HC for value creation by encompassing not only firm specific stock of knowledge and capabilities of employees but also the strategic human resource management practices.

Like some related studies conducted outside Africa, many researchers in Africa also believe that the value generating competencies of employees may be resourceful for business success. Against such backdrop, the objective of a research by Carla (2015) was to empirically examine the association between human capital efficiency, determined through value added human capital and financial performance of listed companies on the Main Board and Alternative Exchange of the Johannesburg Stock Exchange. Financial performance in the researcher's context was further denominated into accounting and market performance. While return on assets (ROA), revenue growth (RG), and headline earnings per share (EPS) were adopted as proxies for measuring accounting performance; market-to-book ratio and total share return were determinants for measuring market performance. Estimating the test result through a Multivariate regression with panel data covering 390 companies for time series of between 2001 to 2011 in the financial, basic materials, consumer services, consumer goods, industrial and technology industries. Findings revealed that: first, human capital efficiency indicated no effect on market performance of listed companies in South Africa; secondly, higher human capital efficiency showed greater accounting returns from both tangible and intangible assets in all the studied industries; thirdly, higher profitability indicated positive association with higher human capital efficiency in almost all reviewed industries in South Africa, except in the technology industry, where human capital efficiency did not indicate any association with headline EPS. Furthermore, higher RG revealed positive association with human capital efficiency among industries which are not consumer-driven. Human capital efficiency contributed to bottom line profitability in the consumer-driven industries, although, not as a function of revenue growth. Thus, the researcher concluded that human capital efficiency enhances financial performance of listed companies in South Africa and encouraged Management across all industries in the country to continuously enhance the value-creating capacity of their workforce through training, incentives, and other motivations.

Considering the prominence and importance of human resource in the mix of intellectual capital, Kleynhans and Sekhobela (2015) aimed to sectorally measure and compare the level of intellectual capital disclosure among manufacturing firms in South Africa. While data were obtained from the Johannesburg Securities Exchange, Value Added Intellectual Capital Coefficient (VAIC) of the relevant firms were mathematically computed for human capital efficiency, physical capital efficiency, and structural capital efficiency. The average intellectual capital was compared to ascertain the best among various firms and industries. While food process demonstrated the highest CEE, HCE, VIAC, P/B, and P/E; basic metals indicated the highest CEE, SCE, and P/B. Similarly, paper and wood performed better in HCE and VAIC; while Electronics performed well in SCE and P/E. Sectors that did not perform well included; Transport, plastics, chemicals, pharmaceuticals, electrical, and non-metal minerals. The result implied effective and efficient allocation and utilization of resources for creating physical and intellectual values. It was however

recommended among other things that South African managers and stakeholders should install necessary mechanisms to ensure efficiency, especially in HC within plastic, pharmaceutical, chemical, and electrical sectors; considering their strategic economic importance among knowledge-intensive sectors.

Closer to Nigeria, Asare *et al*., (2013) investigated intellectual capital disclosure (ICD) by 25 companies listed on the Ghana Stock Exchange (GSE) in a study which covered between 2006 to 2010. Leveraging on ex-post facto research design and utilising content analysis of annual financial reports, their findings indicated that the level of ICD in annual reports of companies in Ghana is reasonably high and descriptive. This implies that ICD is improving at a relatively marginal rate. Therefore, the researchers recommended international and national accounting regulatory organisations and accounting oversight agencies to develop necessary standards or guidelines on identifying, measuring, and reporting IC.

The nexus between human resource accounting and financial performance of business entities seems to significantly result into a positive trend in Nigeria. For instance, Olayiwola (2016) examined the importance of human capital accounting information on the market value of 50 quoted manufacturing companies in the Nigerian economy. Utilising secondary data obtained from the Annual financial Reports and database of the Nigerian Stock Exchanged for the period, 2007 to 2014, Pooled ordinary least square and Fixed Effect Models were adopted for data analyses. Findings revealed significant positive relevance of human capital cost (β=0.02, t=2.42, p<0.05) with prices of shares. The result implies that investment on human resource has the capacity to increase the wealth of the shareholders, in addition to enhancing the public image of quoted manufacturing companies in Nigeria.

Assessing the impact of Human Capital Efficiency on Corporate Performance of Nigerian quoted industrial goods companies for a period of 6 years (2009-2014), Kwarbai and Akinpelu (2016) adopted the Human Capital component of the Value-added Intellectual Coefficient (VAIC) model of firms' valuation. Whereas the independent variable is human capital efficiency, the dependent variables are employees' Growth, earnings per share, and return on assets. Utilising multivariate regression, findings indicated significant positive association between Human Capital Efficiency and return on assets (ROA) and earning per share (EPS), but an insignificant negative nexus with Size, lagged Human Capital Efficiency, and Number of Employees' Growth. Underscoring the need for more investigations on predictive models for determining the Efficiency of Human Capital, the researchers recommended management of business firms not to emphasize only on profit maximization but also on the holistic transformation of the value of the entire assets. They further recommended that Human Capital should be treated as the most valuable asset of industrial goods sector of the Nigerian economy.

In a relatively recent study on quoted manufacturing firms in Nigeria, OBULOR and Ohaka (2020) examined the effect of human resource cost on financial performance. Panel data covering 2008 to 2017 were obtained by the researchers through ex-post facto design with training cost, return on equity, and earnings per share as specific empirical variables. Moreover, the test result was estimated by utilizing correlation coefficient (R), coefficient of determination (R2), t-test, f-test, and Granger Causality. However, the findings revealed that human resource cost has significant positive effect on financial performance of quoted manufacturing firms in Nigeria. Hence, the researchers recommended manufacturing firms in Nigeria to recognize human capital investment as prerequisite for enhanced corporate performance.

Utilising ex-post facto research design, Jesuwunmi *et al*., (2019) empirically examined the contribution of human resource valuation on financial performance of listed companies in Nigeria. Adopting human resource cost and human capital efficiency as determinants for human resource valuation, secondary data were obtained from the audited annual reports of 24 selected listed companies for 2011-2016. This implies 6 time series and 24 cross-sectional data resulting into 144 pooled observations of panel data. Utilising ordinary linear regression model (OLS) and Karl Pearson Product Moment Correlation Coefficient (PPMC), the researchers found that human resources cost (HRC) and human capital efficiency significantly predicted return on investment, gross profit margin, asset turnover, and return on asset, but insignificantly predicted net profit margin among listed companies in Nigeria. The result of this analysis suggests managers of companies to always ascertain the level of human resource cost/asset that can translate into human capital efficiency. The researchers however recommended Nigerian listed companies to manage their cost or investment on human resource to the minimum amount that can optimize their human capital efficiency, hence, their financial performance. They also highlighted the need to develop accounting standards for regulating human resource reporting to ensure uniformity in disclosures and comparison across firms and industries.

By studying the nexus between human resource accounting and financial performance of firms in Nigeria, Omodero and Ihendinihu (2017) aimed to ascertain the influence of human resource on firms' profit after tax (PAT), total revenue (TR), and net asset (NA) for 2011 to 2015 reporting years. Utilising multivariate regression analysis estimated through the use of SPSS, the hypotheses were tested at 5% level of significance. Their findings revealed that personnel

benefit cost (PBC) positively and substantially influenced PAT, but negatively impact NA. It was however suggested that Firms should adopt the culture of training, developing, and motivating their employees to leverage on their expertise for the financial improvement of their organizations. The researchers believed such has the capacity to lower the rate of labour turnover.

In another study, Micah *et al.,* (2012) adopted descriptive, correlation and ordinary least square regression statistical models for data analyses and for estimating test results. The researchers found that about 75.9% of variation in Human Resource Accounting (HRA) alongside an F– ratio of 3.581 at 5% level of significance was jointly contributed by Financial Performance of business entities. Such association implied that increase in profitability measured through return on equity can motivate more disclosure of human capital information among firms. Thus, boosting the stakeholders' confidence, improving external reputation, and projecting better public outlook for greater legitimacy. Asserting that human resource accounting information of an organization is a crucial variable for decision management within business entities, the researchers recommended financial commitment towards workforce training and development.

Mutalib *et al.,* (2017) investigated the determinants of human capital disclosure among listed firms in Nigeria. The regression result from a longitudinal panel data with 442 observations of firms listed on the Nigerian Stock exchange between 2012–2014 indicated that firm's age, size, and industry classification have significant positive influence on human capital disclosure. In contrast, the auditor type, profitability, inherent risk, and joint audit revealed significant negative influence on human capital disclosure. Thus, such findings practically imply that financial reporting council of Nigeria need to develop disclosure standards for human capital to aid investors in investment decisions.

Empirical study by Oladele *et al.,* (2018) examined the influence of human resource accounting on financial performance of quoted companies in Nigeria for the periods, 2011-2015. Whereas data for measuring financial performance were generated from annual reports, the indices for human resource accounting were determined through profitability, size, financial leverage, and industry type of the firms under review. Descriptive statistics, correlation and regression models were used as analytical tools. However, the findings revealed a positive coefficient value of 0.565 between the independent and dependent variables. Therefore, it was recommended that quoted firms should adopt the technique of capitalizing and disclosing the expenditure incurred on human resource as a strategy for improving their corporate performance. The researchers argued that such is capable of enhancing stakeholders' valuation of the firms. They further advised regulatory organisations to set minimum standard as guide towards human resource disclosure in the annual financial reports of listed firms.

Adopting exploratory research design in a conceptual review, Effiong (2010) highlighted the importance of techniques for measuring, recording, and disclosing human resource, besides its effect on the value of firms. The researcher developed a robust system of data categorization and method of human resource acquisition, recording, and scheduling for easy applicability within the accounting systems of business entities. A model for measuring return on human resource ratio was also developed in this study for easy comparison of human resource performance across operating periods, firms, and industrial standard average. It was however recommended that companies should develop and maintain human resource accounting records as a means of evaluating the extent of the workforce influence on profitability and survival of business organisations. Although, this study provides a fundamental and rudimentary insight into potential reporting methodology for human resource of firms, the empirical applicability and implication of such practice remain unclear.

While intellectual capital (IC) comprising human capital, structural capital, and relational capital have been described as the bedrock for achieving organizational goals (Pulic, 1998), it is apparent that the creative and innovative ingenuity of human capital component of IC is the catalyst that creates and drives the core values of the other two. By empirically exploring human capital disclosure through the effect of Intellectual Capital Reporting on financial performance of listed manufacturing firms in Nigeria, Ofurum *et al.,* (2018) however obtained secondary data from twelve (12) manufacturing firms for 2011-2015. Modified Pulic's Value Added Intellectual Coefficient (VAIC) trademark model was adopted for measuring Intellectual Capital indices. Multiple regression analyses through SPSS version 22 and e-views version 8 was used for estimating the test result. Their result however revealed a mixed finding. Human Capital significantly impacted financial performance; Structural Capital indicated positive & negative relationship with market share & debt-equity ratio respectively while Relational Capital showed a downhill (negative) relationship with corporate performance. Hence, the researchers concluded that proficient and market competition driven workforce within manufacturing firms were consistent with return on shares of business organizations, which may further enhance their status as industry and market leader in the long run.

Albertini and Berger-Remy (2019) observed that many previous researchers have conducted isolated examinations often to determine the nexus between

intellectual capital and performance of business organizations without precision about the extent of contribution to performance by each component of IC. Thus, many of such studies resulted into unclear relationship of the variables. Adopting a statistical meta-analysis of 75 empirical researches covering between 1992 and 2017, their investigation revealed that human capital (HC), structural capital (SC), and relational capital (RC) did not uniformly influence corporate financial performance. This outcome is further explained through the attributes of IC's determinants in connection to ownership, tradability, and Time span as they relate to the beneficiary (the company, the investor, or the customer) of the value created by IC. Moreover, this study lends empirical credence to the principle of resource-based theory, majorly that some components of IC are correlated with financial performance of firms. Also important is that the research develops a four-way knowledge frontier including identification and classification of IC's components, understanding of the combination and effective management of intangible assets, improvement of indicators and measurement systems of IC, and enhancement of the understanding about value creation by means of narratives. Such narrative includes extra-financial disclosure and corporate communication.

Shafi'u *et al.,* (2017) examined the impact of human capital as one of the components of intellectual capital (IC) on the financial performance of listed food product companies in Nigeria from 2010 to 2014. Adopting Pulic's value added intellectual coefficient (VAIC) model, the researchers utilized regression analysis for estimating the test of hypotheses. Their findings indicated significant positive influence by IC components on financial performance of food product firms. Relying on the explanatory power of resource-based theory, the findings suggests that companies especially in food products can enhance their financial performance by greater emphasis on IC.

While the reviewed researches relatedly investigated the financial implication of expenditure in human resource by business entities, none of them adopted salaries, wages, and allowances (SWA), other staff related enxpenses (OSRE), and human resource efficiency (HRE) as predictor variables in the manufacturing sector of the Nigerian economy. Some researchers nonetheless utilized similar constructs as predictor variables but in a different sector of the economy and with different response variables. Specifically, the current researcher did not identify any study that combined SWA, OSRE, and HRE with accounting and capital market performances as response variables in a related investigation of the quoted manufacturing companies in Nigeria. Hence, the current study is an attempt to narrow such gap in knowledge.

Theoretical Background

The construct of human resource can be broadly approached from a wide spectrum of theories such as resource-based view, resource cost theory, knowledge-based theory, organizational ambidexterity theory, dynamic capabilities theory, agency theory, and human capital theory. However, the explanatory power of knowledge-based theory, organisational ambidexterity theory, and agency theory seem germane for clearer conceptualization and understanding of the construct in the current study.

Knowledge Based Theory of a Firm

The knowledge-based theory emphasizes relevant education and training as the source of employees efficiency and criteria for success in business. It was first developed by Penrose as resource-based view (RBV) in 1959 (Okafor & Daferighe, 2019). However, it was later modified by other scholars, including Wernerfelt, Barney, and Conner (Carla, 2006). Knowledge-based theory of a firm considers knowledge as the most strategically significant resource of any organisation. This description explains the importance of knowledge and intellectual capabilities of employees which is increasingly becoming crucial in the decision process, strategic planning, budget, and performance appraisal. As an offshoot from the Resource Based View (RBV), the theory also blends concepts and principles from organizational economics and strategic management (Barney, 1991).

The economic change from material-based production to knowledge -based one is rapidly introducing a new valuation of organisations' workforce. Interestingly, the knowledge workers are increasingly located at the core functions of many firms: concept and technology designers, as well as finance and management experts, among others. This, therefore underpins the labour differentiation that currently exist in most business entities (Child & McGrath, 2001), which often reflect in the level of financial compensation payable to employees.

While, the visible and tangible assets of any firm are just tip of the iceberg; the bulk of the iceberg and main reality that recommend, purchase, install, operate, maintain, or manage other assets is always beneath the water and hidden within the intangible assets of firms. As core component of intangible assets, human resource embodies the knowledge of what firms do, how they are done, and the reason for doing them that way. Although, the proponents of knowledge-based theory remarked that all knowledge at a firm's disposal are resourceful in one way or the other, they further argued that some are of more competitive advantage. In the light of that, expenditure to enhance the stock of knowledge and skills within the workforce of a business entity is speculated by the current researcher to largely influence the financial performance of such entity. Specifically, changes in salaries, wages, allowances,

other staff related expenses and ranking of the productivity of workforce by human resource efficiency are herein expected to make for variation in both accounting profitability and market value models of financial performance.

Organisational Ambidexterity Theory

Developed by Duncan (1976), this theory incorporates the philosophy of shared value through continuous innovation into the design and delivery of organizational goods and services. Thus, it seems to hold reasonable explanatory power into the dynamism of human resource accounting disclosures in connection to financial performance of business entities. While human resource is the core source of all innovations among business model elements, financial performance is crucial to all goals of any business entity. Organisational ambidexterity theory fundamentally emphasizes efficiency benchmarked on innovation in the management of organizational resources as a strategy for improving financial performance. Since the stock of knowledge within the human resource is the core of all innovations capable of enhancing a firm's overall competitive advantage and creates shared value for all the stakeholders, investing in HR and adequately disclosing same in the annual financial report could be value-relevant to capital market investors and management efficiency. In their approach, Yu-Shan *et al.* (2014) defined organizational ambidexterity as the capacity of a business entity to be efficient in its current operation and adaptive to structural changes in political, technological, environmental, societal demands among others. Attaining and sustaining operational efficiency by any organization in a constantly changing and permanently volatile business ecosystem require the knowledge and skill competency of the workforce. The theory is majorly concerned with balancing exploitative and exploratory activities for improving corporate reputation (Pacheco & Vargas, 2017). This underscores the potential of business firms to deliver goals that are beneficial to all stakeholders, either in short or long range of time by exploiting the existing operational competencies of the workforce in addition to exploring new competitive opportunities benchmarked on attracting, training, compensating, and retaining industry relevant personnel. To such extent, human resource expenditure is believed to rank among the frontline business opportunities to be innovatively explored for better financial performance by manufacturing companies in Nigeria. Moreover, human resource is the only catalyst amon business model elements capable of adapting a business entity to the intensely volatile structural changes in political, technological, environmental, societal demands among other macro-economic factors trailing the business landscape in the country. As such, it appears safe to hypothesize that the financial health of manufacturing companies in Nigeria is dependent on the efficiency of the workforce derived through staff training, development, financial compensation among others.

Agency Theory

Although simultaneously and explicitly proposed by two scholars, Stephen Ross and Barry Mitnick, the first comprehensive paper documentation on agency theory was by Stephen Ross in 1972 and published in 1973. Ross (1973) identified the main agency problem in an economic situation as that of reaching a compromise by agents or managers and principals or owners on the compensation system that could pattern the behavior of agents to be consistent with the preference of the principals. Such process often result into conflict between the parties due to inadequate incentive to transparently trust each other to promote their shared interest. Thus, the origin of information asymmetry between the parties. In the context of the current study, agency theory expounds the consolidated benefit of spending to sustain desired quality of human resource and showing same on the annual financial report of business organisations, as a means of lowering the conflict of interest often caused by information discrepancies between principal or owners and their agent or managers. Specifically, the more the engagement in HR expenditure and disclosure in the financial report by a firm, the greater the expected cooperation between its shareholders and managers, the wider its scope of acceptability by variety of users, and the better its outlook in the capital market. Therefore, investing in human resource and disclosing same in the annual financial report can in turn attract more fund from the capital market to the management for business stability and further expansion. As incentive to the management, The higher human capital disclosure by firms, the narrower the information asymmetry, the lower the agency cost, and in turn the more investment from the capital market (Uyar & Kılıç, 2012). Moreover, agency cost refers to avoidable expenses resulting from inefficiency and more than necessary operating cost as part of agency problem in a business entity. Thus, the *apriori* believe in the capacity of its reduction to improve financial performance of business entities. Besides attracting investors from the capital market, mitigating agency problem and deflating the associated cost implies an increase in the financial bottom line for manufacturing entities in Nigeria.

Hypotheses Development

In congruence with popular apriori expectation underlying the reviewed literature, the researchers formulated the following hypotheses:

H_{O1}: There is no significant effect of salaries, wages, allowances and other staff related expenses on return on equity of manufacturing companies in Nigeria.

H_{O2}: salaries, wages, allowances and other staff related expenses do not significantly influence market value of manufacturing companies in Nigeria.

$H_{O3:}$ There is no significant effect of human resource efficiency on return on equity of manufacturing companies in Nigeria.

H_{O4}: Human resource efficiency does not significantly influence market value of manufacturing companies in Nigeria.

Operational Method

Research Design

A combination of causal comparative and descriptive research designs were adopted in this study. While causal comparative design also known as ex post facto design seems the most appropriate for obtaining past economic information from annual financial reports; descriptive design appears most suitable for portraying the prevailing economic conditions resulting from such past economic events. Moreover, the research designs were effectively adopted in similar prior studies by Vafaei *et al.* (2011) and OBULOR and Ohaka (2020).

The sample for this study comprised of fifty-two (52) quoted manufacturing firms in Nigeria out of their population of sixty (60) as shown in Appendix 1. This sample is derived from sample size determination table by Krejcie and Morgan as shown in Appendix 2 (Krejcie & Morgan, 1970). Purposive sampling technique was adopted for selecting sampled firms for the study. That was aimed to sample only those quoted manufacturing companies which fulfilled certain criteria necessary to complete the study, such as operating in the industrial or consumer goods of the manufacturing sector and significantly engaging in expenditure in human resource between 2010 to 2019. Therefore, only twenty (20) manufacturing companies satisfied the condition for inclusion in this research, while the rest were eliminated from the study.

Hence, the sampled manufacturing firms include but not limited to Champion Breweries Plc, Guinness Nigeria Plc, Nigerian Breweries Plc, Dangote Sugar Refinery Plc, Flour Mills Plc, and National Salt Company of Nigeria Plc. others are Cadbury Nigeria Plc, Nestle Nigeria Plc, International Breweries Plc, Nigerian Enamelware Plc, PZ Cussons Nigeria Plc, Uniliver Nigeria Plc, and Berger Paints Plc. last but not the least are Chemicals & Allied Products Plc, Dangote Cement Plc, DN Meyer Plc, Lafarge WAPCO Plc, Cutix Plc, Beta Glass Coy. Plc, and Greif Nigeria Plc.

Data for measuring SWA and OSRE as the determinants of expenditure in human resource and accounting financial performance (return on equity) were obtained from annual financial reports, whereas those for measuring capital market financial performance (market value) were computed using Tobin's Q model as adapted from Akinlo and Iredele (2014) and Oba (2012). Tobin's Q index is a reflection of investors' rating of quoted companies. This simply implies the use of secondary data for empirical analyses. Moreover, The panel data for the analyses resulted into two hundred (200) observations covering 20 manufacturing companies over a range of 10 years (2010-2019).

Theoretical Specification of Model

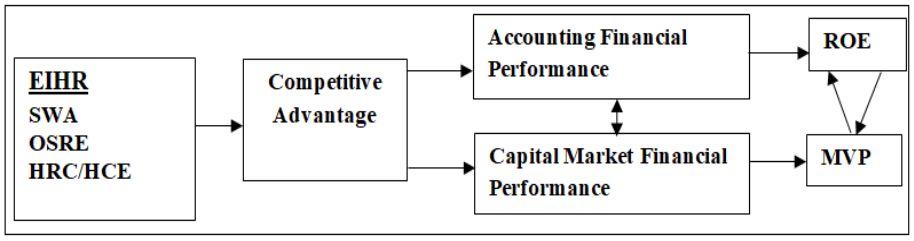

Figure 1

Expenditure in Human Resource (EHR) Impact Model

Source: Researchers' Design, 2021

Salaries, wages, allowances (SWA), other staff related expenses (OSRE), and human resource efficiency (HRE) are the predictor variables and proxies for expenditures in Human resource (EHR). However, the popular *apriori* believe across almost all disciplines and professions within management sciences is that EHR is fundamental for efficient and profitable management of all organizational resources by availing several competitive advantages. For instance, prudently allocating SWA and OSRE for developing and compensating relevant capacity and resourcefulness among the workforce may be capable of raising the overall competitiveness of a company within an industry. Thus, may also improve the capital market value of a firm. Moreover, the economic value added (EVA) of business organisations resulting from the activities of the workforce and estimated as a fraction of revenue is also believed to influence the societal rating of companies, as may be indicated by the performance of their securities and profit bottom line. Hence, EHR seems a guarantee for good financial outlook among business entities. Meanwhile, its influence on manufacturing companies was measured in this study through financial performance as response variables denominated into return on equity (ROE) and market value performance of firms (MVP). ROE and MVP are believed to complement each other in facilitating the overall financial health of business organisations. Put differently, an adequately managed good financial outlook in the capital market may over-time translate into a good accounting profitability indices, vice versa.

Empirical Specification of Model

Four multivariate regression econometric models were adopted in this research. The aim is to ascertain the multiplicative and disaggregated influences of proxies for EHR on financial performance of manufacturing companies in Nigeria. Their general mathematical functions are stated as:

Accounting Ratio = f(Expenditure in HR) …… 3.1

Market Value = f(Expenditure in HR) ..……..…. 3.2

Accounting Ratio = f(HRE) ……..… 3.3

Market Value = f(HRE) …….. 3.4

Accounting Ratio = f(Expenditure in HR, HRE) … 3.5

Market Value = f(Expenditure in HR, HRE) …….. 3.6

Where HRE: human resource efficiency. It is also denoted as human capital efficiency (HCE).

However, the specific multivariate regression equations for testing all the hypotheses are:

ROEi, = $\beta 0i$, + β1SWAi, + β2OSREi, + β3TAi, + β4STRi, + β5LRi,t + $\varepsilon i,t$ …… 3.7

MVPi, = $\beta 0i$, + β1SWAi, + β2OSREi, + β3MCAPi, + β4EPSi, + β5DIVi,t + $\varepsilon i,t$ …… 3.8

ROEi, = $\beta 0i$, + β1HREi, + β2TAi, + β3STRi, + β4LRi, + $\varepsilon i,t$. ……. 3.9

MVPi, = $\beta 0i$, + β1HREi, + β2MCAPi, + β3EPSi, + β4DIVi, + $\varepsilon i,t$ ……. 3.10

Where:
ROE = return on equity;
MVP = market value performance of firms;
$\beta 0$ = intercept;
β1, β2, β3, β4, and β5 = coefficients of predictor and control variables;
HRE = HCE = human resource (capital) efficiency;
SWA = natural log of salaries, wages, and allowances;
OSRE = natural log of other staff related expenses;
TA = natural log of total assets;
STR = sales turnover ratio;
LR = leverage ratio;
MCAP = natural log of market capitalization of a firm;
EPS = earnings per share;
DIV = dividend paid;
Other Denotations
i = specific company (ith company) in the numeric series of companies under review;
t = specific period of time (year) in the time series of the analysis;
ε = stochastic.

Whereas equations (3.7) and (3.8) were for estimating the influence of SWA and OSRE respectively on the accounting and capital market financial performance of quoted manufacturing companies in Nigeria, equations (3.9) and (3.10) respectively measured the effect of HRE on both accounting and capital market financial performance.

Description and Measurement of Operational Variables

Dependent Variables

Dependent varible in this study is financial performance measured through return on equity (ROE) and market value performance (MVP) of firms. The proxies which are respectively for accounting and capital market components of financial performance were adapted from the studies by Amahalu *et al*. (2016) and Obulor and Ohaka (2020). Whereas expenditure in human resource ordinarily appears not to have significant link with return on equity (ROE), the influence of a company in the capital market through stock appreciation, attractiveness to new investors, and more capital mobilization alongside high quality workforce are capable of translating into management efficiency in a manufacturing concern through improved liquidity, better product and service delivery, optimal material and cost management, enhanced reputation, greater patronage in the marketplace, and ultimately profitability demonstrated through ROE. While ROE was computed as profit after tax and preference stock's dividend estimated as a percentage of equity holders fund, MVP was computed through Tobin's Q Model of Estimating the Market Value of Firms. The model expresses the stock market investors valuation of each naira unit of assets. Thus, an index of more than one (1) in the model implies baluation of per naira unit of assets above the book value while index of less than one (1) means valuation below the book value. Moreover, the Tobin's Q formula is:

$$\text{MVP} = \frac{\text{Market Value of total Equity} + \text{Total Book Value of all Liabilities}}{\text{Total Assets}}$$

Independent Variables

Expenditure in human resource adapted from Jesuwunmi *et al*., (2019) and human resource efficiency (HRE) also known as human capital efficiency (HCE) adapted from Kwarbai and Akinpelu (2016) are primary proxies for measuring expenditure in human resource for predicting financial performance of manufacturing companies in Nigeria. While HCE will be computed through Pulic value added intellectual capital (VAIC) model (Pulic, 1998; Kwarbai & Akinpelu, 2016), salaries, wages, allowances (SWA) and other staff related expenses (OSRE) serve as guiding principle for identifying the constituents of expenditure in HR as respectively adapted from Micah *et al.* (2012) and Obulor and Ohaka (2020). Moreover, Pulic value added intellectual capital (VAIC) is estimated as a ratio of value added (VA) of a firms to expenditure on their human capital (HC) indices. Put differently, HCE is the value added to the operating profit by per unit naira expenditure on the personnel. HCE index of more than

one (1) implies a gain on per naira spent on human resource whereas index of less than one (1) means a loss per naira spent on the workforce. In otherwords, the value in excess of one represent the gain and the value of shortage from one is the loss. Moreover, the algebraic equation for VAIC is as follows:

$$\text{Human Capital Efficiency (HCE)} = \frac{\text{Value Added (VA)}}{\text{Human Capital (HC)}}$$

Where:
HC = Personnel Expenses (Salaries and other personnel Benefits)
VA= Total Revenue – (Operating Expenses-Salaries and other personnel Benefits)

$$\text{Therefore, HCE} = \frac{\text{Total Revenue} - (\text{Operating Expenses-Salaries and other personnel Benefits})}{\text{Personnel expenses (Salaries and other personnel Benefits)}}$$

Control Variables

Total assets (TA), sales turnover ratio (STR), and leverage ratio (LR) are possible variables other than the primary independent variables capable of influencing the behavioural pattern of accounting based financial performance represented by ROE. TA, STR, and LR respectively control for the effect of size, commodity market influence, and borrowed capital on ROE. Similarly, market capitalization (MCAP), earnings per share (EPS), and dividend (DIV) paid are possible variables other than primary independent variables capable of influencing the capital market financial performance of companies represented by MVP. MCAP, EPS, and DIV respectively measure the influence of size, profit per share, and paid dividends per share on MVP.

1. Empirical Analyses and Interpretation of Results
Descriptive Statistics and Data Presentation
Descriptive Statistics I

Table 4.1 in Appendix 3 represents the panel data for analysing hypothesis one. While the sample of quoted manufacturing companies used in the investigation is in column 2, column 3 indicates the scope of the research in terms of the range of years. column 4 contains aggregate of salaries, wages, and allowances (SWA) OF THE companies and column 5 represents other staff related expenses (OSRE). Columns 6, 7, and 8 are respectively for total assets (TA), sales turnover ratio (STR), and leverage ratio (LR). Lastly, column 9 contains return on equity (ROE). This test is conducted at 5% level of significance. The mean score and standard deviation of the distribution are further summarized in Table 4.5.

Table 4.5: Mean and Standard Deviation Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
ROE	22.5209	21.15166	198
SWA	13.7963	2.09424	198
OSRE	11.6693	4.09389	198
TA	17.2674	1.85882	198
STR	3.9136	2.77276	198
LR	1.8311	3.63136	198

Source: Researchers' Computation (2021)

Table 4.6: Model Summary

Model Summary[b]									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.405[a]	.164	.142	19.58755	.164	7.544	5	192	.000
a. Predictors: (Constant), LR, SWA, STR, OSRE, TA									
b. Dependent Variable: ROE									

Source: Researchers' Computation (2021)

Table 4.7: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14471.369	5	2894.274	7.544	.000[b]
	Residual	73665.034	192	383.672		
	Total	88136.403	197			
a. Dependent Variable: ROE						
b. Predictors: (Constant), LR, SWA, STR, OSRE, TA						

Source: Researchers' Computation (2021)

Table 4.8: Estimate of the influence from SWA and OSRE on ROE

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-3.735	13.475		-.277	.782		
	SWA	3.125	.934	.309	3.346	.001	.509	1.965
	OSRE	-2.081	.422	-.403	-4.934	.000	.653	1.531
	TA	.146	.945	.013	.155	.877	.631	1.585
	STR	.895	.508	.117	1.763	.079	.983	1.017
	LR	.759	.392	.130	1.934	.055	.960	1.041
a. Dependent Variable: ROE								

Source: Researchers' Computation (2021)

Descriptive Statistics II

Table 4.2 in Appendix 4 is the panel data for analysing hypothesis two. Column 2 represents the sample of quoted manufacturing companies contained in this investigation, while column 3 indicates the scope of the research in terms of the range of years. column 4 is the aggregate of salaries, wages, and allowances (SWA) OF THE companies and column 5 represents other staff related expenses (OSRE). Columns 6, 7, and 8 are respectively for market capitalization (MCAP) of the firms, earnings per share (EPS), and dividend paid (DIV).Finally, column 9 contains market value performance (MVP). This test is conducted at 5% level of significance. The mean score and standard deviation of the distribution are further summarized in Table 4.9.

Table 4.9: Mean and Standard Deviation Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
MVP	.7317	1.03607	195
MCAP	24.4196	2.59651	195
DIV	2.6311	6.40868	195
EPS	3.7166	8.51638	195
SWA	13.8064	2.10870	195
OSRE	11.6872	4.12286	195

Source: Researchers' Computation (2021)

Table 4.10: Model Summary

Model Summary[b]									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.390[a]	.152	.130	.96643	.152	6.793	5	189	.000
a. Predictors: (Constant), OSRE, DIV, MCAP, SWA, EPS									
b. Dependent Variable: MVP									

Source: Researchers' Computation (2021)

Table 4.11: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.721	5	6.344	6.793	.000[b]
	Residual	176.525	189	.934		
	Total	208.246	194			
a. Dependent Variable: MVP						
b. Predictors: (Constant), OSRE, DIV, MCAP, SWA, EPS						

Source: Researchers' Computation (2021)

Table 4.12: Estimate of the influence from SWA and OSRE on MPV

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	4.670	.744		6.279	.000		
	MCAP	-.099	.034	-.248	-2.874	.005	.604	1.656
	DIV	.008	.026	.052	.326	.745	.178	5.629
	EPS	.008	.020	.067	.407	.684	.167	5.996
	SWA	-.108	.044	-.220	-2.452	.015	.557	1.794
	OSRE	-.007	.021	-.029	-.355	.723	.671	1.490
a. Dependent Variable: MVP								

Source: Researchers' Computation (2021)

Descriptive Statistics and Presentation of Test Result III

Table 4.3 in Appendix 5 represents the panel data for analysing hypothesis three. Whereas the sample of quoted manufacturing companies investigated in the study is in column 2, column 3 is the range of years covered in the research. column 4 contains the aggregate of human resource expenses (HRE) and column 5 indicates total assets (TA). Columns 6 and 7 respectively represent sales turnover ratio (STR), and leverage ratio (LR). Lastly, column 8 contains return on equity (ROE). This test is conducted at 5% level of significance. The mean score and standard deviation of the distribution are further summarized in Table 4.13.

Table 4.13: Mean and Standard Deviation Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
ROE	22.5266	21.05376	200
STR	3.8952	2.76528	200
LR	1.8235	3.61392	200
HRE	12.3235	11.08908	200
TA	17.2328	1.88133	200

Source: Researchers' Computation (2021)

Table 4.14: Model Summary

Model Summary[b]									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.231[a]	.053	.034	20.69412	.053	2.744	4	195	.030
a. Predictors: (Constant), TA, STR, LR, HRE									
b. Dependent Variable: ROE									

Source: Researchers' Computation (2021)

Table 4.15: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4700.795	4	1175.199	2.744	.030[b]
	Residual	83508.118	195	428.247		
	Total	88208.913	199			
a. Dependent Variable: ROE						
b. Predictors: (Constant), TA, STR, LR, HRE						

Source: Researchers' Computation (2021)

Table 4.16: Estimate of the influence from HRE on ROE

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	9.733	13.721		.709	.479		
	STR	.774	.533	.102	1.452	.148	.990	1.010
	LR	1.062	.409	.182	2.596	.010	.984	1.016
	HRE	-.098	.137	-.052	-.719	.473	.934	1.071
	TA	.525	.805	.047	.653	.515	.938	1.066
a. Dependent Variable: ROE								

Source: Researchers' Computation (2021)

Descriptive Statistics and Presentation of Test Result IV

Table 4.4 in Appendix 6 represents the panel data for analysing hypothesis four. While the sample of quoted manufacturing companies used in the investigation is in column 2, column 3 indicates the scope of the research in terms of the range of years. columns 4 and 5 are respectively the aggregate of human resource expenses (HRE) and market capitalization (MCAP). Columns 6 and 7 represent earnings per share (EPS) and dividend paid (DIV). Finally, column 8 contains the market value performance (MVP) of the firms. This test is conducted at 5% level of significance. The mean score and standard deviation of the distribution are further summarized in Table 4.17.

Table 4.17: Mean and Standard Deviation Statistics

Descriptive Statistics			
	Mean	Std. Deviation	N
MVP	.7295	1.03101	197
DIV	2.6056	6.38089	197
EPS	3.6802	8.48048	197
HRE	12.4493	11.12569	197
MCAP	24.3818	2.61019	197

Source: Researchers' Computation (2021

Table 4.18: Model Summary

Model Summary[b]									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.333[a]	.111	.092	.98234	.111	5.976	4	192	.000
a. Predictors: (Constant), MCAP, HRE, DIV, EPS									
b. Dependent Variable: MVP									

Source: Researchers' Computation (2021

Table 4.19: Analysis of Variance

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	23.067	4	5.767	5.976	.000[b]
	Residual	185.279	192	.965		
	Total	208.346	196			
a. Dependent Variable: MVP						
b. Predictors: (Constant), MCAP, HRE, DIV, EPS						

Source: Researchers' Computation (2021

Table 4.20 Estimate of the influence from HRE on MVP

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.121	.734		5.617	.000
	DIV	.007	.026	.044	.273	.785
	EPS	.008	.020	.070	.417	.677
	HRE	.006	.006	.061	.894	.372
	MCAP	-.144	.030	-.365	-4.724	.000
a. Dependent Variable: MVP						

Source: Researchers' Computation (2021

Empirical Analyses of the Hypotheses

Test of Hypothesis One

H_{O1}: There is no significant effect of salaries, wages, allowances and other staff related expenses on return on equity of manufacturing companies in Nigeria.

Derivative of the Regression Equation: ROE = -3.735 + 3.125SWA - 2.081OSRE + 0.146TA + 0.895STR + 0.759LR

If other variables are held constant, Table 4.8 indicates that a unit change in either SWA or OSRE causes unstandardized beta coefficient variations of 3.125 (312.5%) and - 2.081 (-208.1%) respectively to ROE. The same table further reveal that a unit shift in the control variables, TA, STR, or LR respectively causes 0.146 (14.6%), 0.895 (89.5%), and 0.759 (79.5%) unstandardized beta coefficient changes in ROE, if other variables are also held constant.

The sig (P-values) of 0.001 and 0.000 for SWA and OSRE are both less than 0.05 level of significance, while those of TA (0.877), STR (0.079), and LR (0.055) are all greater than 0.05 level of significance, as shown in Table 4.8.

Except for SWA, the T-values of -4.934 ,0.155, 1.763, and 1.934 in Table 4.8 for OSRE, TA, STR, and LR are less than the critical T of 1.972. Moreover, SWA demonstrated a greater T-value (3.346) than critical T-value of 1.972.

Adding to an adjusted R-Square of 0.142 (14.2%) in Table 4.6 of the general model, the sig F (P-value) of 0.000 in Table 4.7 is less than 0.05 level of significance and the calculated F-value of 7.544 in the same table is greater than the critical F-value of 2.26. Considering the statistically significant P-values of SWA and OSRE supported by significant result in the general model, the null hypothesis (H_{O1}) is herein rejected. Meanwhile, Table 4.8 further reveals that variance inflation factor of less than 10 for all the parameters indicate absence of multicolinearity in the predictor variables and also corroborate the appropriateness of the model as adopted in this research.

Test of Hypothesis Two

H_{O2}: salaries, wages, allowances and other staff related expenses do not significantly influence market value of manufacturing companies in Nigeria.

Derivative of the Regression Equation: MVP = 4.670 - 0.108SWA - 0.007OSRE - 0.099MCAP + 0.008EPS + 0.008DIV

If other variables are held constant, Table 4.12 reveals that a unit variation in SWA or OSRE returns a corresponding unstandardized beta coefficient contributions of - 0.108 (-10.8%) and - 0.007 (-0.7%) respectively to MVP. If other variables are likewise held constant, a unit change in MCAP, EPS, or DIV results into corresponding unstandardized beta coefficients shifts of -0.099 (-9.9%), 0.008 (0.8%), or 0.008 (0.8%) in MVP, as further indicated in Table 4.12.

The calculated sig (P-values) of 0.005 for MCAP and 0.015 for SWA are less than 0.05 level of significance while 0.723 for OSRE, 0.684 for EPS, and 0.745 for DIV are all greater than 0.05 level of significance. Although, SWA and MCAP are suggesting a rejection of the null hypothesis, OSRE, EPS, and DIV are indicating the contrary.

In support of the latter to accept the null hypothesis, the calculated T-values of -2.452 for SWA, -0.355 for OSRE, -2.874 for MCAP, 0.326 for DIV, and 0.407 for EPS in Table 4.12 are all less than the critical T-value of 1.972. Considering the insignificant P-values and T-values of SWA and OSRE, the null hypothesis (H_{O2}) is ultimately accepted.

To test the general model however, the adjusted R-square in Table 4.10 is 0.130 (13%). Additionally in Table 4.11, the sig F (P-value) of 0.000 is less than 0.05 level of significance and the calculated F-value of 6.793 in same table is greater than the critical F of 2.26. Perhaps, the significance of the general model resulted from the weighted contributions of control variables. Moreover, the variance inflation factor (VIF) of less than 10 for all the parameters in Table 4.12 suggests the absence of multicolinearity in the analysis and demonstrates the appropriateness and adequacy of the model.

Test of Hypothesis Three

$H_{O3:}$ There is no significant effect of human resource efficiency on return on equity of manufacturing companies in Nigeria.

Derivative of the Regression Equation: ROE = 9.733 + -0.098HRE + 0.525TA + 0.774STR + 1.062LR

If other variables are held constant as indicated in Table 4.16, a unit shift in HRE results into -0.098 (-9.8%) unstandardized beta coefficient variation in ROE. In Table 4.16 similarly, unit changes in the control variables (TA, STR, or LR) causes 0.525 (52.5%), 0.774 (77.4%), and 1.062 (106.2%) respective unstandardized beta coefficient variation in ROE, if other variables are respectively held constant.

Except LR with sig (P-value) of 0.010 in Table 4.16, The P-values of 0.473, 0.515, and 0.148, respecttively for HRE, TA, and STR in the same table are greater than 0.05 level of significance.

Except for LR with calculated T-value of 2.596 in Table 4.16, the calculated T-values of -0.719, 0.653, and 1.452 for HRE, TA, and STR in the same table are less than the critical T of 1.972. Such indices are more suggestive of accepting the null hypothesis. Considering the statistically insignificant P-value and T-value of HRE, the null hypothesis (H_{O3}) is ultimately accepted.

However, test of the general model reveals an insignificant or a weak but positive adjusted R-square of 0.034 (3.4%) in Table 4.14. The calculated sig F (P-value) of 0.030 in Table 4.15 is less than 0.05 level of significance and the calculated F-value of 2.744 in the same table greater than the critical F of 2.42. The significance of the general modle may have also resulted from weighted contributions of the control variables. Moreover, variance inflation factor (VIF) of less than 10 for all the parameters in the analysis is an indication of absence of multicolinearity and appropriateness of the general model.

Test of Hypothesis Four

H_{O4}: Human resource efficiency does not significantly influence market value of manufacturing companies in Nigeria.

Derivative of the Regression Equation: MVP = 4.121 + 0.006HRE - 0.144MCAP + 0.008EPS + 0.007DIV

Table 4.20 shows that a unit change in HRE causes an unstandardized beta coefficient variation of 0.006 (0.6%) in MVP, if other variables are held

constant. In the same table similarly, unit shifts in the unstandardized beta coefficients of MCAP, EPS, and DIV result into - 0.144 (-14.4%), 0.008 (0.8%), and 0.007 (0.7%) changes in MVP, if other variables are respectively held constant.

Except MCAP with sig (P-value) of 0.000 in Table 4.20, P-values of 0.372,0.677, and 0.785 in same table for HRE, EPS, and DIV are all greater than 0.05 level of significance. The P-value indices are suggestive of a more tendency towards accepting the null hypothesis.

IN Table 4.20 moreover, the calculated T-values of 0.894, -4.724, 0.417, and 0.273for HRE, MCAP, EPS, and DIV are all less than the critical T of 1.972. Such outcome is also suggestive of a more tendency for accepting the null hypothesis. Concluding from the positive unstandardized beta coefficient contribution of HRE, the null hypothesis (H_{O4}) is however rejected.

Table 4.18 indicated a weak but positive adjusted R-square of 0.092 (9.2%). In a further corroboration in Table 4.19, a calculated sig F (P-value) of 0.000 is less than 0.05 level of significance and 5.976 F-value is greater than critical F of 2.42. Adding to the insignificant but positive unstandardized beta coefficient of HRE, the statistically significance in the general model may have also resulted from weighted contributions from the control variables.

2. DISCUSSION OF THE FINDINGS

The rejection of the null hypothesis in hypotheses one and four is an indication of positive relationship between expenditure in human resource (EHR) and financial performance of quoted manufacturing companies in Nigeria. Their varying extents of disaggregated unstandardized beta coefficients, P-values, and calculated T-values in each analysis supported by positive adjusted R-square indices, P-values of less than 0.05 level of significance, and greater calculated F-values than the critical F-values in the general models corroborated the relationship and also attributed the direction of the association. The finding is in congruence with those of some earlier researchers in the same subject area.

For instance, Olayiwola (2016) found a positive association while investigating the importance of human capital accounting information on the market value of 50 quoted manufacturing companies in the Nigerian economy. The researcher significantly linked positive relevance of human capital cost (β=0.02, t=2.42, p<0.05) with prices of shares. The result implies that investment on human resource has the capacity to increase the wealth of the shareholders, in addition to enhancing the public image of quoted manufacturing companies in Nigeria. Similarly, Kwarbai and Akinpelu (2016) concluded a significant positive association between Human Capital Efficiency and return on assets (ROA) and earning per share (EPS) among quoted industrial goods companies in Nigeria, Vafaei *et al.*, (2011) established a significant positive relationship between human resource accounting disclosure and market price of shares in Britain ang Hong Kong, OBULOR and Ohaka (2020) revealed that human resource cost has significant positive effect on financial performance of quoted manufacturing firms in Nigeria, Omodero and Ihendinihu (2017) found that personnel benefit cost (PBC) positively and substantially influenced profit after tax.

However, hypothesis two and three are accepted. While such outcome appears mathematically inconsistent for hypothesis three, there are few accounting circumstances that could cause it. In fact, related factors may determine the direction of HRE and profitability expressed as ROE. Thus, unit changes in human resource efficiency (HRE) is not normally supposed to be inversely related with return on equity (ROE) but may, if shares are issued as bonuses or raising more capital through shares without additional structure for expansion of operations. The first case implies increasing the number of share holding without monetary resources for expanding operations, whereas the second case means raising financial resources in a short-run condition of optimal production possibility curve (PPC).

The acceptance of null hypothesis two is simply an empirical demonstration of poor consideration of expenditure in human resource by capital market investors in their investment decisions. Hence, the negative unstandardized beta coefficient for SWA and OSRE. Put differently, unit variations in the indeces of both variables did not positively influence share prices, which are the major determinants for variability in tobin's q model. However, labour efficiency is reasonably influenced by the multiplicative power of SWA and OSRE; then, there are instances of related empirical studies. According to Carla (2015), human capital efficiency indicated no effect on market performance of listed companies in South Africa. Specifically, the result showed that human capital efficiency did not indicate any association with earnings per share in the technology industry of the country. Vafaei *et al.* (2011) posited also that human resource accounting disclosure was insignificant with market price of shares among companies in Australia and Singapore.

Capital market investors in Nigeria therefore seem to be sharing in the unenthusiastic philosophy of many managers about spending and investing on the workforce for better overall performance. Perhaps, such posture is benchmarked on popular assumption that the supply of labour by far outweighs its demand in the country, which is oftentimes an opinion devoid of detailed analysis about the distinct qualities and

productivity of employees. Thus, the managers as well as the investors may have not seen the business value relevance of attracting, improving, and retaining high quality labour force. More so, as the translating and coordinating effort which drives other resources towards efficient attainment of the organizational goals (Obulor & Ohaka, 2020).

Nonetheless the weighted (jointly by main predictors and control predictors) multiplicative outcome in the general models, there is need to explicate the superior explanatory power across the spectrum of disaggregated nexus between predictor and response variables. In the test of hypothesis one, the unstandardized beta coefficient contribution for salaries, wages, and allowances (SWA) is 312.5%. Such influence on ROE is supported by statistically significant P-value and calculated T. Hence, SWA corroborated the outcome of the general model for rejecting the null hypothesis one. In the management science literature moreover, salaries, wages, and allowances are core among other motivational tools for human resource and ROE is a direct product of internal organizational operations mainly coordinated by the workforce. Perhaps, the underlying factor for its significant coefficient contribution to ROE.

The unstandardized beta coefficient of -208.1% for OSRE is a significant negative influence on ROE, yet the variable demonstrated a statistically significant P-value. Although, the calculated T is less than the critical T, it did not negatively influence the weighted indices in the general model for rejecting the null hypothesis one. Since other staff related expenses (OSRE) is mostly not directly monetized for the employees or often monetized for them against a future time, it may not exert significant motivational influence on the performance of employees. Thus, the negative coefficient contribution to ROE. The coefficient contribution and P-value of OSRE among quoted manufacturing companies in Nigeria could be identified as a special pattern of relationship, which may be subjected to further study for clearer and better comprehinsion.

The control variables, TA, STR, and LR respectively contributed 14.6%, 89.5%, and 79.5% unstandardized beta coefficients to ROE. Despite the reasonable coefficient contributions, their resulting P-values and calculated T-values are statistically insignificant. Nevertheless, extant literature in management sciences holds that firm-specific attributes, such as in the control variables are capable of influencing financial performance of business entities. Specifically, changes in leverage ratio (LR) is practically connected with ROE indices via tax savings arising from the difference between company income tax rate and prevailing interest rate. Thus, their unstandardized beta coefficients may have contributed significantly to the general model indices for rejecting the null hypothesis one.

In the test of hypothesis two, SWA indicated unstandardized beta coefficient of -10.8% to MVP. While its P-value is statistically significant, the calculated T is less than the critical T, yet, the test of general model is statistically significant. However, there is no direct conventional literature in support of a clear nexus between SWA and MVP. Market value performance (MVP) cannot be directly attributed to SWA due to greater interference from macroeconomic and other exogeneous factors often considered by investors for decisions. For example, salaries, wages, and allowances in a particular company cannot undermine domestic social environment, government policies and other political factors, and national economic health to influence the capital market value of the firm.

Similar to SWA, OSRE contributed unstandardized beta coefficient of -0.7% to MVP. While P-value and calculated T are statistically insignificant in the analysis, the -0.7% coefficient effect is indeed a weak one. Like SWA, that could imply that capital market investors did not also appreciate other expenses on employees. In the extant accounting literature however, there is an indirect nexus between market value of firms and both SWA and OSRE. Earnings per share and dividend per share often considered by capital market investors for investment decisions are products of employees performance as disclosed in the financial report. SWA and OSRE are core motivating factors for human resource efficiency that result into EPS and dividend.

The control variables, MCAP, EPS, and DIV contributed -9.9%, 0.8%, and 0.8% respective unstandardized beta coefficients to MVP. Although, the variables are all part of the capital market decision model, EPS and DIV indices are positive contributions. Maybe, capital market investors trusted firm-computed EPS and DIV more than the market generated MCAP. Calculated T-values for all the variables are less than the critical T-value, only the P-value of MCAP is less than 0.05 level of significance.

HRE contributed -9.8% unstandardized beta coefficient to ROE in the test of hypothesis three. While HRE is conventionally and theoretically expected to influence profitability, there are other factors that could interfere with such influence where profitability is expressed as ROE. For instance, high or low leverage ratio can undermine labour efficiency in relation to ROE. However, the P-value and calculated T-value of HRE in this study are statistically insignificant at greater than 0.05 level of significance and less than the critical T-value.

TA, STR, and LR also contributed Aunstandardized beta coefficient of 52.5%, 77.4%, and 106.2% to ROE. But for LR, the P-values and calculated T- values for TA and STR are statistically insignificant at greater than 0.05 level of significance and less than critical T. As empirically demonstrated in the analysis, TA and STR have potentials to influence ROE but may be limited by other factors, such as size of leverage in relation to equity. Moreover, ROE is unavoidably influenced by LR. Debt-Equity ratio largely determines ROE. Since interest on aggregate debt is deducted before applying company tax rate, profit after tax is inflated by the tax savings(the difference between company tax rate and prevailing interest rate applied on debt capital). Thus, increasing ROE index. In addition, such tax savings changes with the size of debt capital.

In the test of hypothesis four, HRE contributed unstandardized beta coefficient of 0.6% to MVP. The P-value and calculated T-value are not statistically significant at greater than 0.05 level of significance and less than the critical T respectively. The positive but insignificant coefficient contribution is however an indication of positive influence on capital market investors by labour efficiency.

The unstandardized beta coefficient contributions of the control variables (MCAP, EPS, and DIV) to MVP are respectively -14.4%, 0.8%, and 0.7%. Except MCAP, the P-values of other control variables are statistically insignificant at greater than 0.05 level of significance. Relatedly, the calculated T-values of all the control variables are also statistically insignificant at less than the critical T. The investors however seemed more influenced by EPS and Div than MCAP, as indicated in their unstandardized beta coefficients. Perhaps, they also trusted EPS and DIV as obtained from accounting records than capital market generated MCAP.

3. Conclusion, Recommendations, and Business Implication of the Study

CONCLUSION

The researchers concluded that expenditure in human resource (EHR) among quoted manufacturing companies in Nigeria is positively associated with their financial performance. Put differently, variations in the extent of such expenditure were appropriately adequate for predicting corresponding changes in financial performance of the companies. It implies that expenditure in human resource may rank as an investment with potential for financial return. The test result moreover demonstrated that the prospect for financial return was more prominent for accounting profitability expressed as return on equity (ROE) than in market value performance (MVP). Perhaps, the insignificant outcome in the capital market is due to age-long psyche of profit maximization and poor level of information about the current organizational paradigm shift to knowledge economy that characterized majority of investors in Nigeria. In a different observation in Jordan, Bontis (2001) noted changes that often trail stock prices from financial market participants whenever there are changes in chief executives and other top managers (human resource not recognized in the financial statements as assets) seems a market recognition and reflection of the value in human knowledge, skills, and expertise. Obulor and Ohaka (2020) moreover described human resource as the translating and coordinating effort which drives other resources towards efficient attainment of the organizational goals.

Meanwhile, The outcome lends empirical credibility to the arguments by exponents of knowledge based theory, organizational ambidexterity theory, and agency theory. The knowledge-based theory emphasizes expenditure in training, development, and commensurate compensation as the source of employees efficiency and criteria for success in business. In other words, it suggests revaluation of business model elements on the basis of knowledge scaling. While human resource (HR) is the core of all innovations among business model elements, organisational ambidexterity theory fundamentally emphasizes efficiency benchmarked on exploring the innovative capacity of the HR as a competitive strategy for improving financial performance. Ross (1973) identified the main agency problem in an economic situation as that of reaching a compromise by agents or managers and principals or owners on the compensation system that could pattern the behavior of agents to be consistent with the preference of the principals. Such process often result into conflict between the parties due to inadequate incentive to transparently trust each other to promote their shared interest. Thus, the origin of information asymmetry between the parties. In the context of the current study therefore, agency theory expounds the consolidated benefit of spending to sustain desired quality of human resource and showing same on the annual financial report of business organisations, as a means of lowering the conflict of interest often caused by information discrepancies between principal or owners and their agent or managers.

Given the assumption that most investors and management regard the financial health of a firm as the ultimate objective, achieving such objective through efficiency in deploying and applying different assets (especially human knowledge and skill) seem paramount. Moreover, almost all financial performance indicators of business entities are generated from interplay of business activities and engagements articulated, deliberated, decided, implemented, evaluated, and reported by human element.

The central objective of the International Financial Reporting Standards (IFRS) IASB and Generally Accepted Accounting Principles by FASB is enhancing disclosures to reflect 'true and fair view' of all expenditure, income, assets, and liabilities. Considering the importance of human resource among other business model elements, not to disclose HR information in the annual financial report is apparently an unfair treatment to the stakeholders.

RECOMMENDATIONS

Against the foregoing backdrop, the researchers recommends that:

i. Quoted manufacturing companies in Nigeria should adopt reasonable salaries, wages, and allowances (SWA) as well as reporting same as a competitive strategy for improving financial performance.
ii. The companies should also adopt other staff related expenses (OSRE) as strategy for attracting and retaining high quality workforce.
iii. Accounting regulatory authorities in Nigeria should adequately protect the interest of stakeholders by standardizing human resource accounting practices and enforcing compliance among quoted manufacturing firms in Nigeria.
iv. Nigerian stock exchange (NSE) and other accounting regulatory authorities should specifically make human resource efficiency (HRE) or human capital efficiency (HCE) as contained in the VAIC model a compulsory accounting ratio to be disclosed by quoted manufacturing companies in Nigeria.

Business Implication of the Study

Considering the economic shift in the business operational landscape from production and competition largely benchmarked on availability and accessibility of materials to efficient value chain and supply chain management, there is need for a corresponding shift in strategy from physical assets to intellectual assets and resources. Special attention should be placed on human resource as the background premise upon which all other business success depends. In the instance of globalization and almost zero information asymmetry that characterize the prevailing business terrain, human resource or human capital seems the only reliable catalyst for driving value creation and productivity in the current knowledge intensive economy. As the core of strategic management, all expenditure purposively allocated to attract, recruit, induce, motivate, train, and retain desired stock of workforce in an organisation is herein found to improve financial performance of business organisations. Thus, the determinant for competitive advantage in the current business paradigm is largely hidden more in the stock of human resource at the disposal of a firm than any other organizational element or resource. Hence, the value-relevance of increasing revaluation, ranking, and compensating of factors of production and other business model elements on the basis of knowledge scaling. Drawing from the outcome of the study, the researchers asserts that the distinction between progressive and discontinuing business operation in the 21st century lies in the quality and compensation model of human resource within the organization.

REFERENCES

- Abhayawansa S., & Abeysekera, I. (2008). An explanation of human capital disclosure from the resource based perspective. *Journal of Human Resource Costing and Accounting*, *12*(1): 51-64.
- Akinlo, O., & Iredele, O. (2014). Corporate environmental disclosures and market value of quoted companies in Nigeria. *The Business & Management Review*, *5*(3): 171-184.
- Albertini, E., & Berger-Remy, F. (2019). Intellectual capital and financial performance: A Meta-analysis and research agenda. *M@n@gement , 22*(2): 216-249
- Al-shubiri, F. (2013). The impact of value added intellectual coefficient components on financial health. *Review International Comparative Management 14*(3):459-472.
- Amahalu, N., Obi J., Abiahu, M., & Okika, E. (2016). *Effect of Human Resource Accounting on Financial Performance of Quoted Deposit Money Banks in Nigeria*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3050255&download=yes (Retrieved on 8th August 2020).
- American Accounting Association, (1973). Report of the committee on accounting for human resources. *The Accounting Review*, *48*(3): 6-11.
- Amin, S., Aslam, S., & Makki, M. (2014). Intellectual capital and performance of pharmaceutical firms in Pakistan. *Pakistan Journal of Social Sciences, 34(*2):433-450.
- Asare N., Onumah J., & Simpson S. (2013). Exploring the disclosure of intellectual capital in Ghana: Evidence from listed companies. *Journal of Accounting and Marketing*, *2*(3): 1-7.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, *17*(1): 99-120.
- Bontis, N. (2001). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International Journal of Management Reviews*, *3*(1): 41-60.
- Bontis, N. (2003). Intellectual capital disclosure in Canadian corporations. *Journal of Human Resource Costing & Accounting*, *7*(1): 9-20.
- Carla M. (2015). An industry analysis of the power of human capital for corporate performance: Evidence from South Africa. *South African Journal of Economic and Management Sciences, 18* (4), 486-499.
- Carla, C. (2006). The knowledge based-view of the firm; From the theoretical origins to future

implications. *Working Paper of Instituto Superior de Economia*, e Gestão. *8-11 September 2006.* UniversidadeTécnica de Lisboa. https://pdfs.semanticscholar.org/3e41/145145cf61217ea38f536119d5d0074a2557.pdf. (Retrieved on 5th August 2020).

- Child, J., & McGrath, R. (2001). Organizations unfettered: Organizational forms in an information-intensive economy. *Academy of Management Journal, 44*(6): 1135-1148.
- Duncan, R. (1976). The ambidextrous organization: Designing dual structures for innovation. In Killman, R. H., Pondy, L. R., & Sleven, D. (Eds.), The management of organization, 1; 167-188. New York: North Holland.
- Edvinsson, L., & Sullivan, P. (1996). Developing a model for managing intellectual capital. *European Management Journal, 14*(4): 356-364.
- Effiong, S. (2010). Human capital accounting and the value of the firm. *International Journal of Management Sciences, 2*(1):1-6.
- Eisenhardt, K. (1989). Agency theory: An assessment and review. *Academy of Management Review, 14*(1): 57-74.
- Firer, S., & Williams, S. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of Intellectual Capital, 4*(3): 348-360.
- Flamholtz, E., & Lacey, J. (1981). The Implications of the Economic Theory of Human Capital for Personnel Management. *Personnel Review, 10*(1): 30-40.
- Gadzar, K. (2007). *Reporting Non-financials*. John Wiley & Sons, West Sussex, 83p.
- Jesuwunmi, C., Nzewi, U., Obelogu, M., & Udodi, C. (2019). Human resource valuation and financial performance of Nigerian listed companies. *Canadian Contemporary Research Journal, 1*(1): 40-68.
- Khan, F., Khan, R., & Khan, M. (2012). Impact of intellectual capital on financial performance of banks in Pakistan: Corporate restructuring and its effect on employee morale and performance. *International Journal of Business and Behavioural Science, 2*(6):22-30.
- Kleynhans, E., & Sekhobela, M. (2015). Intellectual capital of the various manufacturing sectors of South Africa. *Nijmegen Center for Economics (NiCE) Working Paper 09-108, Institute for Management Research*. April 2009. Radboud University, Nijmegen. http://www.ru.nl/nice/workingpapers. (Retrieved on 8th August 2020).
- Krejcie, R., & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*: 607-610.
- Kwarbai, J., & Akinpelu, M. (2016). Human Capital Efficiency and Corporate Performance: The Nigerian Perspective. International Journal of Business and Management, 4(3): 1-9.
- Lina, A. (2014). The influence of intellectual capital components towards the company performance. *Journal of Management, 14*(1):125-140.
- Micah, L., Ofurum, C. & Ihendinihu, J. (2012). Firms' financial performance and human resource accounting disclosure in Nigeria. *International Journal of Business and Management, 7*(14): 67-75
- Mirza, A., Orrell, M., & Holt, G. (2008). IFRS: *Practical Implementation Guide and Workbook.* 2nd (Ed.). John Wiley and Sons Inc, New Jersey, 79p.
- Mouritsen, J., Bukh, P., & Marr, B. (2004). Reporting on intellectual capital: Why, what and how? *Measuring Business Excellence*, *8*(1): 46-54.
- Mutalib, A., Hafiz, M., & Hairul, A. (2017). Determinant of human capital disclosure in the post IFRS regime: An examination of listed firms in Nigeria. *Malaysian Accounting Review, 16*(2): 1-20.
- Oba, V. (2012). The impact of corporate social responsibility on market value of quoted conglomerates in Nigeria. *ICAN Journal of Accounting and Finance*, *1*(3): 64-70.
- Obulor, O., & Ohaka, J. (2020). Training cost and financial performance nexus: Sector analysis of quoted manufacturing firms in Nigeria. *Research Journal of Finance and Accounting, 10*(18): 83-92.
- Ofurum, C., Onuoha, T., & Nwaekpe, U. (2018). Intellectual capital reporting and corporate financial performance of quoted firms in Nigeria. *International Journal of Advanced Academic Research Business Development & Management, 4*(2): 1-24.
- Okafor, U., & Daferighe, E. (2019). Accounting Practices and Performance of Small and Medium-scale Enterprises (SMEs) in Akwa Ibom State, Nigeria. *IOSR Journal of Business and Management, 21*(8):1-9.
- Oladele, P., Aribaba, F., Ahmodu, O., & Omobola, M. (2018). An empirical study of human resource accounting disclosure on financial performance of selected listed firms in Nigeria. *Journal of Accounting and Management, 8*(2):70-82.
- Olayiwola, J. (2016). Human capital accounting information and firms' value: An analysis of selected quoted manufacturing companies in Nigeria (2007-2014). *International Journal of Economics, Commerce and Management, 4*(5): 14-27.
- Omodero, C., & Ihendinihu, J. (2017). Human resource accounting and financial performance of firms in Nigeria: Evidence from selected listed firms on the Nigerian Stock Exchange. *International Journal of Interdisciplinary Research Methods. 4*(2): 25-33.
- Pacheco, L., & Vargas, F (2017). Sustainable ambidexterity: creating shared value through engaging paradox. *Conference Paper, Escola de Administração de Empresas de São Paulo da*

Fundação Getulio Vargas. December 2017. Fundação Getulio Vargas, Brasil. 6p.

- Penrose, E. (1959). *The Theory of the Growth of the Firm*. Basil Blackwell, Oxford, 98p.
- Pulic, A. (1998). Measuring the performance of intellectual potential in knowledge economy. *A Paper Presented at 2nd World Congress on Measuring and Managing Intellectual Capital by the Austrian Team for Intellectual Potential.* McMaster University, Hamilton.1-20p.
- Pulic, A. (2000). VAIC: An Accounting tool for IC management. *International Journal of Technology Management, 20*(58), 702-714.
- Ross, S. (1973). The economic theory of agency: The principal's problem. *American Economic Review,* 62(2); 134-139.
- Salman, R., Mansor, M., Babatunde, A. & Tayib, M. (2012). Impact of intellectual capital on return on asset in Nigerian manufacturing companies. *Interdisciplinary Journal of Contemporary Research in Business,* 2(4):21-30
- Shafi'u, A., Noraza, M., & Saleh, M. (2017). The impact of intellectual capital on the financial performance of listed Nigerian food products companies. *Journal of Accounting and Taxation, 9*(11): 147-160.
- Uyar, A., & Kılıç, M. (2012). Value relevance of voluntary disclosure: evidence from Turkish firms. *Journal of Intellectual Capital, 13*(3): 363-376.
- Vafaei, A., Taylor, D., & Ahmed, K. (2011). Value relevance of intellectual capital disclosures. *Journal of Intellectual Capital 12*(3):407-429.
- Wagner, C. (2007). Valuing a Company's Innovators. *The Futurist, 41*(5): 7.
- Yu-Shan, C., Ching-Hsun, C., & Yu-Hsien, L. (2014). The determinants of green radical and incremental innovation performance: Green shared vision, green absorptive capacity, and green organizational ambidexterity. *Sustainability, 6*(11): 7787-7806
- Yusuf, I. (2013). The relationship between human capital efficiency and financial performance: An empirical investigation of quoted Nigerian banks. *Research Journal of Finance and Accounting, 4*(4):148-155.

Appendix 3

Table 4.1: Panel Data 1

S/N	FIRMS	YEAR	SWA	OSRE	TA	STR	LR	ROE
1	**Champion Breweries Plc**	2010	245,089	0	7,381,842	1.40	6.99	11.74
		2011	393,060	0	6,958,425	1.70	4.35	57.05
		2012	265,435	163,081	6,799,200	1.84	2.98	38.97
		2013	281,534	111,556	9,137,716	7.66	2.98	25.56
		2014	490,250	182,003	9,592,381	2.62	0.63	12.85
		2015	460,558	456,640	10,329,160	1.35	0.45	1.08
		2016	559,011	312,112	10,154,855	8.51	0.30	6.91
		2017	656,966	1,225,392	10,088,861	6.13	0.24	6.36
		2018	663,376	249,082	10,487,010	5.57	0.32	3.32
		2019	617,344	258,624	10,981,383	1.90	0.37	2.10
2	**Guinness Nigeria Plc**	2010	6,037,317	2,683,853	78,396,876	3.09	1.41	40.17
		2011	6,423,755	693,882	92,175,032	3.64	1.29	46.12
		2012	7,600,884	739,258	102,534,172	4.49	1.75	36.82
		2013	7,730,644	1,488,436	121,060,621	3.56	1.63	25.77
		2014	8,348,242	1,179,166	132,328,273	2.91	1.94	21.25
		2015	10,963,749	1,764,464	122,246,632	1.92	1.53	16.13
		2016	9,569,515	2,751,086	136,992,444	1.33	2.29	4.84
		2017	9,660,166	1,885,653	146,038,216	1.21	2.40	4.48
		2018	8,568,103	1,031,408	153,254,968	7.63	0.75	7.67
		2019	7,582,952	1,186,449	160,792,627	3.29	0.81	6.16
3	**International Breweries Plc**	2010	755,341	0.00	12,516,033	1.17	3.97	111.25
		2011	831,819	0.00	14,288,312	8.40	8.02	137.24
		2012	1,219,372	25,498	23,036,762	1.94	2.31	50.63
		2013	1,578,150	51,628	30,171,590	2.96	1.46	24.81
		2014	1,359,226	61,712	24,370,540	2.44	1.16	18.68
		2015	1,605,123	131,283	30,171,590	1.38	1.48	16.00
		2016	1,783,535	194,685	43,560,195	1.47	1.39	18.95
		2017	2,129,558	179,662	232,149,251	3.11	2.24	7.45
		2018	7,778,096	1,068,536	310,278,920	3.61	7.83	11.00
		2019	10,524,301	647,552	365,146,533	8.87	47.9	37.23
4	**Nigerian Breweries Plc**	2010	10,840,856	4,647,528	114,389,432	7.81	1.28	60.46
		2011	12,074,377	5,156,070	215,447,123	8.06	1.51	49.08
		2012	18,204,079	5,715,892	253,633,629	1.16	1.71	40.71
		2013	19,155,265	8,490,641	252,759,633	1.27	1.25	38.34

		2014	20,700,513	8,116,555	349,676,784	1.26	1.03	24.74
		2015	27,500,383	10,547,021	356,707,123	8.98	1.07	22.09
		2016	28,860,900	10,170,507	367,639,915	7.97	1.22	17.13
		2017	28,860,900	10,170,507	382,726,540	6.71	1.15	18.53
		2018	31,527,145	10,873,198	388,766,316	4.33	1.33	11.64
		2019	31,527,145	10,873,198	388,262,869	3.08	1.33	11.65
5	**Dangote Sugar Refinery Plc**	2010	1,461,230	106,232	71,691,255	2.23	0.52	28.83
		2011	1,799,188	408,618	72,814,721	5.02	0.86	16.00
		2012	1,795,836	400,348	83,051,450	7.00	0.80	20.06
		2013	2,430,450	285,014	87,112,512	1.55	0.62	23.03
		2014	3,239,315	1,200,212	97,287,804	8.78	0.66	19.88
		2015	1,558,439	1,532,876	106,671,333	2.69	0.61	16.78
		2016	2,193,959	1,453,553	175,593,979	4.31	1.35	19.30
		2017	1,385,291	2,363,203	196,064,664	1.37	0.98	40.10
		2018	1,737,175	3,087,233	178,523,711	1.46	0.67	20.50
		2019	2,056,988	2,812,294	198,129,122	1.16	0.68	20.41
6	**Flour Mills Plc**	2010	3,320,732	340,745	100,957,576	5.41	1.85	47.90
		2011	3,198,776	475,614	116,730,494	4.61	1.78	22.47
		2012	4,231,862	994,510	172,508,941	4.00	1.16	10.25
		2013	8,226,155	1,204,655	223,889,725	4.30	1.42	7.62
		2014	8,859,262	1,394,433	220,145,555	1.81	1.23	10.31
		2015	7,853,418	2,036,490	231,529,878	1.02	1.40	0.94
		2016	11,641,441	2,008,028	233,296,607	8.27	1.33	9.81
		2017	11,504,161	2,083,883	343,933,158	8.93	2.18	9.09
		2018	12,444,521	2,589,005	322,604,582	6.84	1.13	6.10
		2019	14,484,296	3,009,210	314,058,187	5.84	1.26	13.91
7	**National Salt Company Of Nigeria Plc**	2010	763,184	70,681	7,509,792	1.05	0.52	34.65
		2011	902,142	57,203	10,046,942	6.43	0.77	38.90
		2012	796,451	144,487	10,689,544	9.61	0.63	42.06
		2013	764,511	25,918	11,431,167	2.40	0.66	39.17
		2014	737,225	420,459	12,555,885	8.33	0.99	29.19
		2015	925,524	497,646	16,294,826	6.05	1.30	29.80
		2016	781,786	471,987	24,603,267	8.42	2.06	30.02
		2017	1,049,668	508,430	30,123,247	1.08	1.61	46.33
		2018	1,202,741	542,946	30,270,429	1.00	1.55	37.17
		2019	1,297,203	558,617	38,668,792	5.98	2.49	16.64
8	**Cadbury Nigeria Plc**	2010	3,387,190	889,601	28,717,816	1.42	1.11	9.93
		2011	4,179,730	790,831	33,656,352	5.65	0.88	22.13
		2012	4,055,806	737,264	40,156,508	1.29	0.83	17.24
		2013	4,322,662	1,013,588	43,172,624	2.60	1.36	25.10
		2014	4,135,837	1,009,797	28,811,286	1.81	1.36	16.76
		2015	4,023,849	1,457,439	28,417,005	9.08	1.31	9.39
		2016	4,148,296	1,552,098	28,409,000	4.69	1.57	2.68
		2017	3,590,995	1,446,726	28,423,121	6.11	1.42	2.56
		2018	3,874,699	1,450,878	27,528,040	3.57	1.17	6.49
		2019	3,868,227	1,566,257	28,801,938	3.40	1.21	8.52
9	**Nestle Nigeria Plc**	2010	4,901,143	4,425,549	60,347,062	7.93	3.06	82.19
		2011	6,069,387	5,235,540	77,728,293	7.77	2.35	71.08
		2012	7,081,299	6,166,746	88,963,218	1.05	1.60	61.83
		2013	8,001,617	7,580,659	108,207,480	1.57	1.67	54.83
		2014	9,196,332	7,096,188	106,062,067	1.23	1.95	61.87
		2015	9,662,142	9,138,170	119,215,053	1.03	2.14	62.45
		2016	10,967,121	9,850,746	169,585,932	7.60	4.49	25.67
		2017	11,322,223	11,436,386	146,804,128	1.09	2.27	75.15
		2018	12,300,255	11,206,389	162,334,422	9.75	2.23	85.64
		2019	12,536,952	13,400,397	193,374,314	9.43	3.25	100.28
10	**Nigerian Enamelware Plc**	2010	323,165	26,360	1,221,305	2.01	4.21	27.07
		2011	316,589	30,712	1,019,320	1.72	2.43	29.65
		2012	314,159	37,196	2,167,153	1.55	0.91	5.54
		2013	359,612	30,189	2,203,388	1.47	0.86	0.24
		2014	16,691	77,287	3,084,021	1.46	1.48	6.94
		2015	20,611	90,672	5,022,544	1.35	2.85	5.70
		2016	19,580	89,877	4,539,683	1.35	2.64	9.46

		2017	28,999	13,177	5,826,562	1.19	3.08	3.16
		2018	19,204	7,891	4,576,107	1.82	2.21	0.23
		2019	14,993	1,151	4,381,630	2.87	2.71	20.44
11	**Pz Cussons Nigeria Plc**	2010	5,490,378	435,143	58,968,513	6.28	0.61	13.70
		2011	6,195,368	512,272	68,926,529	5.17	0.65	12.45
		2012	6,463,758	483,904	64,406,797	4.49	0.48	5.89
		2013	4,224,646	282,717	72,296,420	6.32	0.58	12.06
		2014	4,558,558	312,443	51,694,166	3.88	1.03	14.45
		2015	4,386,640	315,898	48,106,661	4.29	0.81	8.16
		2016	5,749,932	403,945	58,279,602	2.52	0.73	1.15
		2017	4,777,268	321,649	73,039,610	5.60	1.14	6.56
		2018	6,722,107	770,993	74,576,119	3.04	0.49	4.83
		2019	5,423,486	699,320	64,315,676	1.61	0.90	1.71
12	**Uniliver Nigeria Plc**	2010	29,653	4,137	23,681,724	9.03	2.11	50.16
		2011	36,875	7,736	25,935,341	8.35	2.35	56.99
		2012	42,410	7,377	32,249,928	1.37	2.63	58.02
		2013	45,328	11,536	36,497,624	1.43	3.68	50.82
		2014	51,610	16,238	43,754,114	1.01	5.12	32.26
		2015	52,004	10,424	45,736,255	1.13	5.27	14.90
		2016	44,649	7,870	50,172,484	7.07	5.20	26.28
		2017	46,181	9,491	72,491,309	7.11	0.51	9.82
		2018	47,971	8,686	121,084,365	5.72	0.49	12.75
		2019	51,966	10,072	131,843,373	3.95	0.56	11.15
13	**Berger Paints Plc**	2010	304,160	18,910	2,605,446	6.09	0.61	12.02
		2011	289,580	40,446	2,673,008	5.98	0.54	7.78
		2012	389,564	40,446	2,929,838	5.84	0.63	4.34
		2013	442,178	53,191	3,627,598	4.88	0.45	8.51
		2014	437,604	49,270	3,640,145	5.18	0.48	15.31
		2015	571,543	54,716	3,895,870	6.08	0.51	29.01
		2016	522,371	44,324	4,102,265	4.51	0.58	5.33
		2017	549,814	38,417	4,311,424	4.67	0.63	51.09
		2018	431,587	34,488	4,535,299	4.73	0.61	19.67
		2019	550,892	37,239	5,066,449	3.52	0.65	20.54
14	**Chemicals & Allied Products Plc**	2010	377,632	40,581	2,370,301	1.79	1.31	11.76
		2011	346,259	54,539	3,067,146	6.54	0.92	6.56
		2012	346,995	59,546	2,875,802	1.06	1.57	9.97
		2013	424,584	55,431	3,035,012	1.59	1.39	11.17
		2014	23,747	10,466	3,080,881	1.11	1.61	14.08
		2015	537,936	65,846	3,409,300	1.08	1.24	11.44
		2016	507,348	73,285	4,915,999	9.14	1.15	7.02
		2017	621,089	78,171	5,013,990	8.80	1.24	6.68
		2018	648,107	75,527	6,311,246	8.64	1.25	7.23
		2019	878,917	83,865	6,760,961	5.41	1.68	7.25
15	**Dangote Cement Plc**	2010	6,475,938	334,144	398,699,629	1.48	0.92	49.59
		2011	7,054,114	429,752	525,939,735	1.15	0.80	38.66
		2012	12,965,294	1,031,711	624,000,619	1.21	0.51	35.43
		2013	16,640,925	964,616	820,477,742	1.71	0.44	36.79
		2014	16,640	965	963,441	1.56	0.51	29.10
		2015	22,209	1,304	1,124,475	1.30	0.53	25.10
		2016	27,588	1,534	1,475,441	9.77	0.67	34.75
		2017	26,936	1,826	1,611,087	1.45	0.43	25.69
		2018	31,538	1,075	1,721,974	1.11	0.33	37.22
		2019	35,653	1,259	1,823,984	7.87	0.42	20.38
16	**Dn Meyer Plc**	2010	147,690	10,117	2,715,977	4.59	3.68	4.02
		2011	152,111	17,666	2,728,698	1.30	3.01	7.97
		2012	158,564	17,031	2,577,673	1.70	2.96	3.68
		2013	214,442	26,287	2,597,516	1.52	3.04	4.03
		2014	184,685	20,298	2,418,612	1.17	2.68	4.78
		2015	205,591	20,399	2,301,121	1.12	2.43	10.69
		2016	161,990	13,023	1,924,167	8.98	3.22	46.00
		2017	156,979	12,695	1,890,966	9.16	4.63	78.10
		2018	152,349	12,721	1,839,132	1.01	5.82	44.86
		2019	188,640	15,564	3,720,214	0.11	####	41.30

17	**Lafarge Wapco Plc**	2010	2,516,367	1,053,322	118,480,913	1.42	1.28	10.11
		2011	3,962,329	1,128,469	152,414,784	1.37	1.72	15.43
		2012	5,157,222	949,806	151,655,619	2.10	0.95	16.55
		2013	6,281,576	1,078,379	159,866,917	1.37	0.73	30.25
		2014	7,448,690	744,639	343,627,558	1.57	0.24	10.25
		2015	9,539,546	1,363,681	381,272,953	5.83	0.26	9.86
		2016	6,372,559	542,344	537,598,212	6.58	0.58	6.11
		2017	14,687,390	1,187,296	616,169,940	3.62	1.33	4.99
		2018	15,121,809	931,099	577,692,296	2.36	1.26	1.62
		2019	15,475,537	1,122,460	500,081,653	1.16	0.38	6.29
18	**Cutix Plc**	2010	##########	0	1,060,868	2.52	1.24	29.08
		2011	99,371,099	0	933,361	1.62	0.89	17.09
		2012	63,010	30,970	941,609	1.29	0.83	15.52
		2013	89,077	31,408	1,073,865	1.29	0.80	25.34
		2014	95,529	38,928	1,744,670	8.21	1.49	8.25
		2015	119,436	35,650	1,968,814	9.66	1.65	7.11
		2016	138,538	41,552	1,891,718	8.99	1.17	10.06
		2017	156,808	71,766	2,329,792	7.53	1.30	11.11
		2018	201,572	86,988	2,836,262	4.64	1.18	17.03
		2019	314,393	83,048	2,885,643	3.51	1.33	29.58
19	**Beta Glass Coy. Plc**	2010	1,090,153	409,763	15,171,796	1.87	0.61	14.62
		2011	1,627,970	97,463	18,021,590	1.37	0.61	12.75
		2012	1,652,701	274,771	22,456,567	1.07	0.80	10.67
		2013	1,776,651	430,912	27,166,481	1.33	0.98	10.67
		2014	1,855,181	386,918	26,928,387	2.28	0.69	14.96
		2015	2,017,952	453,589	27,171,069	4.36	0.55	11.01
		2016	2,265,330	488,221	33,184,130	2.10	0.55	19.07
		2017	2,071,883	534,430	38,211,613	3.03	0.52	16.55
		2018	2,645,683	503,176	46,079,629	2.33	0.56	17.05
		2019	3,008,811	42,601	52,080,362	2.49	0.51	16.15
20	**Greif Nigeria Plc**	2010	40,237	2,329	118,480,913	2.40	0.90	10.46
		2011	45,347	2,858	152,414,784	1.85	1.26	7.66
		2012	9,654	1,417	151,655,619	2.12	1.10	12.95
		2013	10,491	1,524	159,866,917	1.94	1.14	9.60
		2014	45,533	7,188	343,627,558	1.86	0.97	12.89
		2015	50,692	7,548	381,222,953	1.79	1.13	7.33
		2016	54,397	10,171	537,598,212	1.27	1.14	8.03
		2017	60,766	10,849	616,169,904	7.91	1.18	13.68
		2018	28,357	2,877	579,692,917	7.18	1.31	15.53
		2019	32,607	1064	500,081,653	7.03	1.20	12.64

Source: Researchers' Compilation, 2021

Appendix 4

Table 4.2: Panel Data 2

S/N	FIRMS	YEAR	SWA	OSRE	MCAP	EPS	DIV	MVP
1	**Champion Breweries Plc**	2010	245,089	0	2,007,000,000	-1.03	0.02	0.85
		2011	393,060	0	3,627,000,000	-1.33	0.02	1.31
		2012	265,435	163,081	3,735,000,000	-1.49	0.02	1.51
		2013	281,534	111,556	152,190,000,000	-1.27	0.02	1.50
		2014	490,250	182,003	62,820,000,000	-0.24	0.02	0.39
		2015	460,558	456,640	30,330,000,000	0.01	0.02	0.31
		2016	559,011	312,112	21,420,000,000	0.07	0.02	0.23
		2017	656,966	1,225,392	18,720,000,000	0.07	0.02	0.19
		2018	663,376	249,082	15,580,697	-0.03	0.02	0.24
		2019	617,344	258,624	7,438,021	-0.02	0.02	0.27
2	**Guinness Nigeria Plc**	2010	6,037,317	2,683,853	281,061,806,901	9.31	8.25	0.62
		2011	6,423,755	693,882	368,731,379,750	12.16	10	0.56
		2012	7,600,884	739,258	414,119,251,700	9.95	8	0.66
		2013	7,730,644	1,488,436	355,389,612,368	7.93	7	0.62
		2014	8,348,242	1,179,166	253,215,098,812	6.36	3.2	0.66
		2015	10,963,749	1,764,464	181,308,937,835	5.18	3.2	0.78
		2016	9,569,515	2,751,086	120,471,055,040	-1.34	0.5	0.65

		2017	9,660,166	1,885,653	141,553,489,672	1.28	0.64	0.71
		2018	8,568,103	1,031,408	157,707,562,968	3.3	1.84	0.43
		2019	7,582,952	1,186,449	65,821,003,711	2.5	1.52	0.45
3	**International Breweries Plc**	2010	755,341	0.00	20,945,419,681	1.33	0.08	0.80
		2011	831,819	0.00	18,596,400,651	-1.03	0	0.89
		2012	1,219,372	25,498	52,852,928,166	0.7	0	0.57
		2013	1,578,150	51,628	93,634,508,541	0.71	0	0.45
		2014	1,359,226	61,712	76,986,605,674	0.64	0.25	0.54
		2015	1,605,123	131,283	52,675,045,987	0.59	0.32	0.60
		2016	1,783,535	194,685	60,943,611,680	0.81	0.25	0.45
		2017	2,129,558	179,662	179,536,585,760	0.31	0.35	0.13
		2018	7,778,096	1,068,536	262,173,789,048	-0.45	0.25	0.89
		2019	10,524,301	647,552	81,660,688,392	-3.23	0.25	0.98
4	**Nigerian Breweries Plc**	2010	10,840,856	4,647,528	583,073,556,414	4.01	3.54	0.56
		2011	12,074,377	5,156,070	714,057,136,143	5.08	1.25	0.55
		2012	18,204,079	5,715,892	1,111,717,551,504	5.03	3	0.63
		2013	19,155,265	8,490,641	1,269,778,074,133	5.7	3	0.56
		2014	20,700,513	8,116,555	1,310,680,376,786	5.62	5.75	0.51
		2015	27,500,383	10,547,021	1,078,357,720,768	4.82	4.7	0.52
		2016	28,860,900	10,170,507	1,135,445,071,242	3.58	4.6	0.55
		2017	28,860,900	10,170,507	1,078,672,817,680	4.13	3.58	0.54
		2018	31,527,145	10,873,198	683,665,870,361	2.43	3.73	0.57
		2019	31,527,145	10,873,198	471,804,615,128	2.01	2.33	0.57
5	**Dangote Sugar Refinery Plc**	2010	1,461,230	106,232	192,000,000,000	0.94	1	0.30
		2011	1,799,188	408,618	56,400,000,000	0.62	0.6	0.46
		2012	1,795,836	400,348	72,000,000,000	0.9	0.3	0.44
		2013	2,430,450	285,014	140,400,000,000	1.13	0.5	0.38
		2014	3,239,315	1,200,212	76,200,000,000	0.9	0.5	0.40
		2015	1,558,439	1,532,876	249,600,000,000	1.05	0.5	0.38
		2016	2,193,959	1,453,553	73,320,000,000	1.18	0.5	0.58
		2017	1,385,291	2,363,203	240,000,000,000	3.15	0.5	0.49
		2018	1,737,175	3,087,233	183,000,000,000	2.15	0.5	0.40
		2019	2,056,988	2,812,294	168,000,000,000	1.07	1.1	0.40
6	**Flour Mills Plc**	2010	3,320,732	340,745	117,877,760,046	7.83	2	0.65
		2011	3,198,776	475,614	517,067,740,366	5.37	2	0.64
		2012	4,231,862	994,510	151,760,497,785	-5.4	1.6	0.54
		2013	8,226,155	1,204,655	207,554,570,292	3.73	2	0.59
		2014	8,859,262	1,394,433	93,518,840,867	4.28	2.1	0.55
		2015	7,853,418	2,036,490	54,584,466,310	0.35	2.1	0.58
		2016	11,641,441	2,008,028	48,522,441,446	3.97	1	0.57
		2017	11,504,161	2,083,883	118,911,472,574	3.75	1	0.69
		2018	12,444,521	2,589,005	94,719,138,499	3.52	1	0.53
		2019	14,484,296	3,009,210	80,777,793,438	4.71	1.2	0.56
7	**National Salt Company Of Nigeria Plc**	2010	763,184	70,681	16,929,911,235	0.62	0.5	0.34
		2011	902,142	57,203	10,624,247,896	0.84	0.7	0.44
		2012	796,451	144,487	21,195,507,024	1.04	0.9	0.39
		2013	764,511	25,918	39,715,081,286	1.02	0.9	0.40
		2014	737,225	420,459	16,479,506,711	0.7	0.5	0.50
		2015	925,524	497,646	18,943,484,403	0.79	0.55	0.57
		2016	781,786	471,987	27,607,147,899	0.91	0.7	0.67
		2017	1,049,668	508,430	49,014,609,993	2.02	1	0.62
		2018	1,202,741	542,946	47,689,890,804	1.67	1	0.61
		2019	1,297,203	558,617	34,310,226,995	0.7	0.4	0.71
8	**Cadbury Nigeria Plc**	2010	3,387,190	889,601	80,169,800,659	0.43	1	0.53
		2011	4,179,730	790,831	35,672,745,024	1.17	1	0.53
		2012	4,055,806	737,264	90,780,852,902	1.07	1.1	0.45
		2013	4,322,662	1,013,588	184,723,383,784	1.92	1.3	0.44
		2014	4,135,837	1,009,797	59,205,266,120	1.06	0.7	0.60
		2015	4,023,849	1,457,439	24,149,457,849	0.61	0.65	0.57
		2016	4,148,296	1,552,098	15,250,065,802	-0.16	0.35	0.61
		2017	3,590,995	1,446,726	29,431,424,745	0.16	0.16	0.59

		2018	3,874,699	1,450,878	18,782,019,620	0.44	0.25	0.54
		2019	3,868,227	1,566,257	14,855,788,939	0.57	0.49	0.53
9	**Nestle Nigeria Plc**	2010	4,901,143	4,425,549	243,445,656,431	19.08	10.6	0.75
		2011	6,069,387	5,235,540	353,255,185,266	20.81	10.33	0.70
		2012	7,081,299	6,166,746	554,859,376,400	26.67	12.55	0.62
		2013	8,001,617	7,580,659	951,187,502,400	28.08	20	0.63
		2014	9,196,332	7,096,188	801,969,962,961	28.05	34	0.66
		2015	9,662,142	9,138,170	681,684,376,720	29.95	27.5	0.68
		2016	10,967,121	9,850,746	642,051,564,120	10	19	0.82
		2017	11,322,223	11,436,386	1,233,365,201,549	42.55	25	0.69
		2018	12,300,255	11,206,389	1,177,094,534,220	54.26	47.5	0.69
		2019	12,536,952	13,400,397	1,165,125,421,875	57.63	45	0.76
10	**Nigerian Enamelware Plc**	2010	323,165	26,360	2,702,937,600	1.18	0.4	0.81
		2011	316,589	30,712	2,292,998,400	1.39	0.42	0.71
		2012	314,159	37,196	2,151,705,600	1.01	0.45	0.48
		2013	359,612	30,189	2,044,627,200	1.17	0.45	0.46
		2014	16,691	77,287	2,016,115,200	1.36	0.45	0.60
		2015	20,611	90,672	1,886,860,800	1.17	0.45	0.74
		2016	19,580	89,877	1,858,348,800	2.11	0.45	0.82
		2017	28,999	13,177	1,471,852,800	0.71	0.45	0.76
		2018	19,204	7,891	1,680,307,200	-0.04	0	0.69
		2019	14,993	1,151	1,680,307,200	-3.18	0	0.73
11	**Pz Cussons Nigeria Plc**	2010	5,490,378	435,143	100,056,021,534	1.68	0.86	0.34
		2011	6,195,368	512,272	111,173,357,288	1.64	0.52	0.31
		2012	6,463,758	483,904	111,173,357,288	0.61	0.43	0.23
		2013	4,224,646	282,717	146,907,650,665	1.23	0.56	0.26
		2014	4,558,558	312,443	94,497,353,671	1.01	0.61	0.55
		2015	4,386,640	315,898	102,041,260,057	0.55	0.61	0.45
		2016	5,749,932	403,945	57,571,917,153	0.1	0.5	0.42
		2017	4,777,268	321,649	81,791,827,127	0.56	0.5	0.53
		2018	6,722,107	770,993	87,747,542,695	0.41	0.15	0.55
		2019	5,423,486	699,320	22,433,195,304	0.15	0.5	0.47
12	**Uniliver Nigeria Plc**	2010	29,653	4,137	101,770,669,125	1.11	1.1	0.74
		2011	36,875	7,736	109,715,591,250	1.46	1.2	0.87
		2012	42,410	7,377	175,923,275,625	1.48	1.4	0.82
		2013	45,328	11,536	203,541,338,250	1.25	0.1	0.94
		2014	51,610	16,238	135,442,005,750	0.64	0.1	0.87
		2015	52,004	10,424	163,627,562,813	0.32	0.1	0.92
		2016	44,649	7,870	132,415,368,750	0.81	0.1	1.21
		2017	46,181	9,491	235,545,222,097	1.78	0.5	0.54
		2018	47,971	8,686	212,565,200,429	1.84	1.5	0.34
		2019	51,966	10,072	126,390,119,174	-1.29	1.2	0.28
13	**Berger Paints Plc**	2010	304,160	18,910	169,938,389,041	2.03	0.5	0.38
		2011	289,580	40,446	74,772,891,178	1.05	0.7	0.35
		2012	389,564	40,446	207,090,416,117	0.83	0.7	0.38
		2013	442,178	53,191	219,676,021,517	0.71	0.52	0.30
		2014	437,604	49,270	151,027,264,793	0.38	0.7	0.32
		2015	571,543	54,716	140,300,662,410	1.14	0.75	0.34
		2016	522,371	44,324	167,203,676,027	0.77	0.75	0.37
		2017	549,814	38,417		0.85	0.5	0.39
		2018	431,587	34,488		1.11	0.5	0.38
		2019	550,892	37,239		1.55	0.65	0.39
14	**Chemicals & Allied Products Plc**	2010	377,632	40,581	122,033,941,515	3.29	2	0.60
		2011	346,259	54,539	68,013,583,404	1.87	1.6	0.48
		2012	346,995	59,546	74,260,165,429	1.99	1.56	0.61
		2013	424,584	55,431	73,072,002,782	2.02	2.25	0.58
		2014	23,747	10,466	46,818,749,845	2.37	2.37	0.62
		2015	537,936	65,846	33,466,581,220	2.49	2.35	0.55
		2016	507,348	73,285	21,188,900,536	2.29	2.2	0.54
		2017	621,089	78,171	29,308,011,956	0.76	2.05	0.55
		2018	648,107	75,527	4,494,382,022	2.9	2.9	0.56
		2019	878,917	83,865	7,400,000,000	2.94	0	0.63

15	**Dangote Cement Plc**	2010	6,475,938	334,144	1,858,964,444,160	6.37	1	0.47
		2011	7,054,114	429,752	1,715,979,095,663	7.13	1.25	0.44
		2012	12,965,294	1,031,711	2,182,888,998,581	8.57	7	0.34
		2013	16,640,925	964,616	3,731,700,716,621	12.34	7	0.30
		2014	16,640	965	3,408,101,481,000	10.9	7	0.34
		2015	22,209	1,304	2,896,886,258,850	10.46	8	0.34
		2016	27,588	1,534	2,964,877,883,396	17.97	8.5	0.40
		2017	26,936	1,826	3,919,316,703,150	14.94	10.5	0.39
		2018	31,538	1,075	3,232,584,254,539	28.25	10.5	0.25
		2019	35,653	1,259	2,419,752,051,368	15.34	16	0.30
16	**Dn Meyer Plc**	2010	147,690	10,117	1,023,129,338	-0.73	0.1	0.80
		2011	152,111	17,666	311,894,129	-0.19	0.1	0.75
		2012	158,564	17,031	451,809,252	-0.08	0.1	0.75
		2013	214,442	26,287	411,000,674	-0.08	0.1	0.76
		2014	184,685	20,298	253,596,161	-0.11	0.1	0.77
		2015	205,591	20,399	221,532,278	-0.25	0.1	0.72
		2016	161,990	13,023	338,454,743	-0.74	0.1	0.78
		2017	156,979	12,695	348,409,294	-0.54	0.1	0.84
		2018	152,349	12,721	293,659,262	-18.85	0.1	0.66
		2019	188,640	15,564	268,772,884	-19.06	0.1	0.84
17	**Lafarge Wapco Plc**	2010	2,516,367	1,053,322	129,819,200,043	1.63	0.25	0.52
		2011	3,962,329	1,128,469	175,683,648,059	2.83	0.75	0.63
		2012	5,157,222	949,806	345,184,000,460	4.87	1.2	0.55
		2013	6,281,576	1,078,379	241,628,800,322	9.34	3.3	0.42
		2014	7,448,690	744,639	440,914,514,955	8.28	3.6	0.20
		2015	9,539,546	1,363,681	186,523,237,473	5.94	3	0.21
		2016	6,372,559	542,344	250,296,559,591	3.94	1.05	0.37
		2017	14,687,390	1,187,296	69,418,404,253	-2.4	1.5	0.57
		2018	15,121,809	931,099	246,449,274,531	0.48	0	0.56
		2019	15,475,537	1,122,460	246,449,274,531	1.41	0	0.28
18	**Cutix Plc**	2010	107,079,942	0	1,167,756,504	0.16	0.12	0.55
		2011	99,371,099	0	819,014,742	0.1	0.12	0.47
		2012	63,010	30,970	536,907,895	0.09	0.12	0.45
		2013	89,077	31,408	624,637,944	0.17	0.12	0.44
		2014	95,529	38,928	1,144,859,317	0.12	0.12	0.60
		2015	119,436	35,650	1,461,897,282	0.05	0.12	0.62
		2016	138,538	41,552	1,664,449,315	0.08	0.14	0.54
		2017	156,808	71,766	1,770,128,636	0.11	0.18	0.57
		2018	201,572	86,988	1,444,284,061	0.5	0	0.54
		2019	314,393	83,048	2,342,558,295	0.27	0.13	0.43
19	**Beta Glass Coy. Plc**	2010	1,090,153	409,763	7,789,563,760	2.95	0.38	0.41
		2011	1,627,970	97,463	6,354,644,120	3.55	0.38	0.38
		2012	1,652,701	274,771	5,249,706,000	2.66	0.38	0.45
		2013	1,776,651	430,912	7,214,595,960	2.95	0.38	0.49
		2014	1,855,181	386,918	13,889,222,160	4.78	0.62	0.41
		2015	2,017,952	453,589	26,723,503,400	3.98	0.4	0.35
		2016	2,265,330	488,221	15,914,108,760	7.6	0.98	0.35
		2017	2,071,883	534,430	25,653,563,320	8.23	1.07	0.34
		2018	2,645,683	503,176	34,148,087,600	10.11	1.3	0.36
		2019	3,008,811	42,601	26,898,493,600	11.16	1.67	0.34
20	**Greif Nigeria Plc**		40,237	2,329	640,879,200	1.02	0.3	1.27
			45,347	2,858	566,259,200	0.9	0.3	8.71
			9,654	1,417	553,467,200	0.91	0.3	8.56
			10,491	1,524	540,675,200	0.72	0.3	7.93
			45,533	7,188	515,091,200	1.02	0.6	3.52
			50,692	7,548	450,278,400	0.58	0.6	3.08
			54,397	10,171	450,278,400	0.64	0.6	1.96
			60,766	10,849	387,597,600	1.16	0	1.48
			28,357	2,877	388,024,000	1	0	1.57
			32,607	1064	388,024,000	1.39	0	1.82

Source: Researchers' Compilation, 2021

Appendix 5

Table 4.3: Panel Data 3

S/N	FIRMS	YEAR	HRE	TA	STR	LR	ROE
1	CHAMPION BREWERIES PLC	2010	5.00	7,381,842	1.40	6.99	11.74
		2011	3.60	6,958,425	1.70	4.35	57.05
		2012	2.26	6,799,200	1.84	2.98	38.97
		2013	3.82	9,137,716	7.66	2.98	25.56
		2014	3.84	9,592,381	2.62	0.63	12.85
		2015	3.34	10,329,160	1.35	0.45	1.08
		2016	3.88	10,154,855	8.51	0.30	6.91
		2017	1.16	10,088,861	6.13	0.24	6.36
		2018	3.59	10,487,010	5.57	0.32	3.32
		2019	5.94	10,981,383	1.90	0.37	2.10
2	GUINNESS NIGERIA PLC	2010	10.35	78,396,876	3.09	1.41	40.17
		2011	13.26	92,175,032	3.64	1.29	46.12
		2012	9.88	102,534,172	4.49	1.75	36.82
		2013	9.35	121,060,621	3.56	1.63	25.77
		2014	7.69	132,328,273	2.91	1.94	21.25
		2015	6.09	122,246,632	1.92	1.53	16.13
		2016	5.20	136,992,444	1.33	2.29	4.84
		2017	7.53	146,038,216	1.21	2.40	4.48
		2018	11.15	153,254,968	7.63	0.75	7.67
		2019	11.39	160,792,627	3.29	0.81	6.16
3	INTERNATIONAL BREWERIES PLC	2010	3.32	12,516,033	1.17	3.97	111.25
		2011	8.65	14,288,312	8.40	8.02	137.24
		2012	7.94	23,036,762	1.94	2.31	50.63
		2013	8.04	30,171,590	2.96	1.46	24.81
		2014	10.27	24,370,540	2.44	1.16	18.68
		2015	10.74	30,171,590	1.38	1.48	16.00
		2016	13.70	43,560,195	1.47	1.39	18.95
		2017	12.71	232,149,251	3.11	2.24	7.45
		2018	10.73	310,278,920	3.61	7.83	11.00
		2019	8.08	365,146,533	8.87	47.92	37.23
4	NIGERIAN BREWERIES PLC	2010	9.26	114,389,432	7.81	1.28	60.46
		2011	9.02	215,447,123	8.06	1.51	49.08
		2012	7.94	253,633,629	1.16	1.71	40.71
		2013	7.21	252,759,633	1.27	1.25	38.34
		2014	6.80	349,676,784	1.26	1.03	24.74
		2015	5.60	356,707,123	8.98	1.07	22.09
		2016	5.91	367,639,915	7.97	1.22	17.13
		2017	6.56	382,726,540	6.71	1.15	18.53
		2018	5.51	388,766,316	4.33	1.33	11.64
		2019	5.33	388,262,869	3.08	1.33	11.65
5	DANGOTE SUGAR REFINERY PLC	2010	55.17	71,691,255	2.23	0.52	28.83
		2011	47.14	72,814,721	5.02	0.86	16.00
		2012	45.54	83,051,450	7.00	0.80	20.06
		2013	33.82	87,112,512	1.55	0.62	23.03
		2014	25.94	97,287,804	8.78	0.66	19.88
		2015	30.72	106,671,333	2.69	0.61	16.78
		2016	44.29	175,593,979	4.31	1.35	19.30
		2017	51.33	196,064,664	1.37	0.98	40.10
		2018	29.05	178,523,711	1.46	0.67	20.50
		2019	31.08	198,129,122	1.16	0.68	20.41
6	FLOUR MILLS PLC	2010	41.52	100,957,576	5.41	1.85	47.90
		2011	42.54	116,730,494	4.61	1.78	22.47
		2012	33.68	172,508,941	4.00	1.16	10.25
		2013	22.53	223,889,725	4.30	1.42	7.62
		2014	23.09	220,145,555	1.81	1.23	10.31
		2015	21.63	231,529,878	1.02	1.40	0.94
		2016	17.13	233,296,607	8.27	1.33	9.81
		2017	26.36	343,933,158	8.93	2.18	9.09
		2018	24.75	322,604,582	6.84	1.13	6.10
		2019	20.08	314,058,187	5.84	1.26	13.91
7	NATIONAL SALT COMPANY OF NIGERIA PLC	2010	9.26	7,509,792	1.05	0.52	34.65
		2011	8.14	10,046,942	6.43	0.77	38.90
		2012	12.86	10,689,544	9.61	0.63	42.06
		2013	12.44	11,431,167	2.40	0.66	39.17
		2014	8.81	12,555,885	8.33	0.99	29.19
		2015	10.32	16,294,826	6.05	1.30	29.80
		2016	6.73	24,603,267	8.42	2.06	30.02

		2017	15.85	30,123,247	1.08	1.61	46.33
		2018	13.22	30,270,429	1.00	1.55	37.17
		2019	13.26	38,668,792	5.98	2.49	16.64
8	CADBURY NIGERIA PLC	2010	4.71	28,717,816	1.42	1.11	9.93
		2011	4.87	33,656,352	5.65	0.88	22.13
		2012	5.53	40,156,508	1.29	0.83	17.24
		2013	5.31	43,172,624	2.60	1.36	25.10
		2014	4.69	28,811,286	1.81	1.36	16.76
		2015	3.70	28,417,005	9.08	1.31	9.39
		2016	3.91	28,409,000	4.69	1.57	2.68
		2017	5.21	28,423,121	6.11	1.42	2.56
		2018	5.58	27,528,040	3.57	1.17	6.49
		2019	5.94	28,801,938	3.40	1.21	8.52
9	NESTLE NIGERIA PLC	2010	7.02	60,347,062	7.93	3.06	82.19
		2011	6.98	77,728,293	7.77	2.35	71.08
		2012	6.98	88,963,218	1.05	1.60	61.83
		2013	6.68	108,207,480	1.57	1.67	54.83
		2014	6.83	106,062,067	1.23	1.95	61.87
		2015	6.26	119,215,053	1.03	2.14	62.45
		2016	6.96	169,585,932	7.60	4.49	25.67
		2017	8.74	146,804,128	1.09	2.27	75.15
		2018	9.06	162,334,422	9.75	2.23	85.64
		2019	8.79	193,374,314	9.43	3.25	100.28
10	NIGERIAN ENAMELWARE PLC	2010	6.43	1,221,305	2.01	4.21	27.07
		2011	6.52	1,019,320	1.72	2.43	29.65
		2012	6.71	2,167,153	1.55	0.91	5.54
		2013	6.07	2,203,388	1.47	0.86	0.24
		2014	25.11	3,084,021	1.46	1.48	6.94
		2015	21.58	5,022,544	1.35	2.85	5.70
		2016	23.96	4,539,683	1.35	2.64	9.46
		2017	56.61	5,826,562	1.19	3.08	3.16
		2018	55.19	4,576,107	1.82	2.21	0.23
		2019	41.32	4,381,630	2.87	2.71	20.44
11	PZ CUSSONS NIGERIA PLC	2010	9.41	58,968,513	6.28	0.61	13.70
		2011	8.66	68,926,529	5.17	0.65	12.45
		2012	9.14	64,406,797	4.49	0.48	5.89
		2013	13.74	72,296,420	6.32	0.58	12.06
		2014	7.65	51,694,166	3.88	1.03	14.45
		2015	7.55	48,106,661	4.29	0.81	8.16
		2016	5.56	58,279,602	2.52	0.73	1.15
		2017	8.42	73,039,610	5.60	1.14	6.56
		2018	6.03	74,576,119	3.04	0.49	4.83
		2019	5.88	64,315,676	1.61	0.90	1.71
12	UNILIVER NIGERIA PLC	2010	11.30	23,681,724	9.03	2.11	50.16
		2011	11.92	25,935,341	8.35	2.35	56.99
		2012	10.08	32,249,928	1.37	2.63	58.02
		2013	8.57	36,497,624	1.43	3.68	50.82
		2014	6.09	43,754,114	1.01	5.12	32.26
		2015	6.14	45,736,255	1.13	5.27	14.90
		2016	8.17	50,172,484	7.07	5.20	26.28
		2017	10.24	72,491,309	7.11	0.51	9.82
		2018	7.83	121,084,365	5.72	0.49	12.75
		2019	4.15	131,843,373	3.95	0.56	11.15
13	BERGER PAINTS PLC	2010	5.61	2,605,446	6.09	0.61	12.02
		2011	5.62	2,673,008	5.98	0.54	7.78
		2012	4.17	2,929,838	5.84	0.63	4.34
		2013	3.78	3,627,598	4.88	0.45	8.51
		2014	3.79	3,640,145	5.18	0.48	15.31
		2015	3.05	3,895,870	6.08	0.51	29.01
		2016	2.65	4,102,265	4.51	0.58	5.33
		2017	3.17	4,311,424	4.67	0.63	51.09
		2018	4.92	4,535,299	4.73	0.61	19.67
		2019	4.09	5,066,449	3.52	0.65	20.54
14	CHEMICALS & ALLIED PRODUCTS PLC	2010	7.49	2,370,301	1.79	1.31	11.76
		2011	8.72	3,067,146	6.54	0.92	6.56
		2012	10.11	2,875,802	1.06	1.57	9.97
		2013	10.32	3,035,012	1.59	1.39	11.17
		2014	9.49	3,080,881	1.11	1.61	14.08
		2015	9.52	3,409,300	1.08	1.24	11.44
		2016	9.51	4,915,999	9.14	1.15	7.02
		2017	8.21	5,013,990	8.80	1.24	6.68

		2018	8.62	6,311,246	8.64	1.25	7.23
		2019	6.71	6,760,961	5.41	1.68	7.25
15	DANGOTE CEMENT PLC	2010	26.62	398,699,629	1.48	0.92	49.59
		2011	28.82	525,939,735	1.15	0.80	38.66
		2012	23.80	624,000,619	1.21	0.51	35.43
		2013	22.64	820,477,742	1.71	0.44	36.79
		2014	16.79	963,441	1.56	0.51	29.10
		2015	12.43	1,124,475	1.30	0.53	25.10
		2016	11.08	1,475,441	9.77	0.67	34.75
		2017	14.81	1,611,087	1.45	0.43	25.69
		2018	14.70	1,721,974	1.11	0.33	37.22
		2019	12.13	1,823,984	7.87	0.42	20.38
16	DN MEYER PLC	2010	4.29	2,715,977	4.59	3.68	4.02
		2011	4.73	2,728,698	1.30	3.01	7.97
		2012	5.17	2,577,673	1.70	2.96	3.68
		2013	4.48	2,597,516	1.52	3.04	4.03
		2014	3.34	2,418,612	1.17	2.68	4.78
		2015	3.23	2,301,121	1.12	2.43	10.69
		2016	3.03	1,924,167	8.98	3.22	46.00
		2017	2.79	1,890,966	9.16	4.63	78.10
		2018	2.44	1,839,132	1.01	5.82	44.86
		2019	2.73	3,720,214	0.11	13.20	41.30
17	LAFARGE WAPCO PLC	2010	10.86	118,480,913	1.42	1.28	10.11
		2011	10.67	152,414,784	1.37	1.72	15.43
		2012	12.36	151,655,619	2.10	0.95	16.55
		2013	10.99	159,866,917	1.37	0.73	30.25
		2014	11.34	343,627,558	1.57	0.24	10.25
		2015	8.80	381,272,953	5.83	0.26	9.86
		2016	10.07	537,598,212	6.58	0.58	6.11
		2017	7.08	616,169,940	3.62	1.33	4.99
		2018	7.27	577,692,296	2.36	1.26	1.62
		2019	8.76	500,081,653	1.16	0.38	6.29
18	CUTIX PLC	2010	10.09	1,060,868	2.52	1.24	29.08
		2011	11.75	933,361	1.62	0.89	17.09
		2012	12.43	941,609	1.29	0.83	15.52
		2013	13.26	1,073,865	1.29	0.80	25.34
		2014	13.69	1,744,670	8.21	1.49	8.25
		2015	12.23	1,968,814	9.66	1.65	7.11
		2016	13.08	1,891,718	8.99	1.17	10.06
		2017	13.25	2,329,792	7.53	1.30	11.11
		2018	14.40	2,836,262	4.64	1.18	17.03
		2019	11.21	2,885,643	3.51	1.33	29.58
19	BETA GLASS COY. PLC	2010	6.63	15,171,796	1.87	0.61	14.62
		2011	6.66	18,021,590	1.37	0.61	12.75
		2012	5.87	22,456,567	1.07	0.80	10.67
		2013	5.62	27,166,481	1.33	0.98	10.67
		2014	6.61	26,928,387	2.28	0.69	14.96
		2015	5.64	27,171,069	4.36	0.55	11.01
		2016	6.34	33,184,130	2.10	0.55	19.07
		2017	7.94	38,211,613	3.03	0.52	16.55
		2018	7.94	46,079,629	2.33	0.56	17.05
		2019	9.14	52,080,362	2.49	0.51	16.15
20	GREIF NIGERIA PLC	2010	17.68	118,480,913	2.40	0.90	10.46
		2011	17.46	152,414,784	1.85	1.26	7.66
		2012	14.28	151,655,619	2.12	1.10	12.95
		2013	13.25	159,866,917	1.94	1.14	9.60
		2014	13.32	343,627,558	1.86	0.97	12.89
		2015	11.87	381,222,953	1.79	1.13	7.33
		2016	13.38	537,598,212	1.27	1.14	8.03
		2017	17.12	616,169,904	7.91	1.18	13.68
		2018	49.21	579,692,917	7.18	1.31	15.53
		2019	45.85	500,081,653	7.03	1.20	12.64

Source: Researchers' Compilation, 2021

Appendix 6

Table 4.4: Panel Data 4

S/N	FIRMS	YEAR	HRE	MCAP	EPS	DIV	MVP
1	**CHAMPION BREWERIES PLC**	2010	5.00	2,007,000,000	-1.03	0.02	0.85
		2011	3.60	3,627,000,000	-1.33	0.02	1.31
		2012	2.26	3,735,000,000	-1.49	0.02	1.51
		2013	3.82	152,190,000,000	-1.27	0.02	1.50
		2014	3.84	62,820,000,000	-0.24	0.02	0.39
		2015	3.34	30,330,000,000	0.01	0.02	0.31
		2016	3.88	21,420,000,000	0.07	0.02	0.23
		2017	1.16	18,720,000,000	0.07	0.02	0.19
		2018	3.59	15,580,697	-0.03	0.02	0.24
		2019	5.94	7,438,021	-0.02	0.02	0.27
2	**GUINNESS NIGERIA PLC**	2010	10.35	281,061,806,901	9.31	8.25	0.62
		2011	13.26	368,731,379,750	12.16	10	0.56
		2012	9.88	414,119,251,700	9.95	8	0.66
		2013	9.35	355,389,612,368	7.93	7	0.62
		2014	7.69	253,215,098,812	6.36	3.2	0.66
		2015	6.09	181,308,937,835	5.18	3.2	0.78
		2016	5.20	120,471,055,040	-1.34	0.5	0.65
		2017	7.53	141,553,489,672	1.28	0.64	0.71
		2018	11.15	157,707,562,968	3.3	1.84	0.43
		2019	11.39	65,821,003,711	2.5	1.52	0.45
3	**INTERNATIONAL BREWERIES PLC**	2010	3.32	20,945,419,681	1.33	0.08	0.80
		2011	8.65	18,596,400,651	-1.03	0	0.89
		2012	7.94	52,852,928,166	0.7	0	0.57
		2013	8.04	93,634,508,541	0.71	0	0.45
		2014	10.27	76,986,605,674	0.64	0.25	0.54
		2015	10.74	52,675,045,987	0.59	0.32	0.60
		2016	13.70	60,943,611,680	0.81	0.25	0.45
		2017	12.71	179,536,585,760	0.31	0.35	0.13
		2018	10.73	262,173,789,048	-0.45	0.25	0.89
		2019	8.08	81,660,688,392	-3.23	0.25	0.98
4	**NIGERIAN BREWERIES PLC**	2010	9.26	583,073,556,414	4.01	3.54	0.56
		2011	9.02	714,057,136,143	5.08	1.25	0.55
		2012	7.94	1,111,717,551,504	5.03	3	0.63
		2013	7.21	1,269,778,074,133	5.7	3	0.56
		2014	6.80	1,310,680,376,786	5.62	5.75	0.51
		2015	5.60	1,078,357,720,768	4.82	4.7	0.52
		2016	5.91	1,135,445,071,242	3.58	4.6	0.55
		2017	6.56	1,078,672,817,680	4.13	3.58	0.54
		2018	5.51	683,665,870,361	2.43	3.73	0.57
		2019	5.33	471,804,615,128	2.01	2.33	0.57
5	**DANGOTE SUGAR REFINERY PLC**	2010	55.17	192,000,000,000	0.94	1	0.30
		2011	47.14	56,400,000,000	0.62	0.6	0.46
		2012	45.54	72,000,000,000	0.9	0.3	0.44
		2013	33.82	140,400,000,000	1.13	0.5	0.38
		2014	25.94	76,200,000,000	0.9	0.5	0.40
		2015	30.72	249,600,000,000	1.05	0.5	0.38
		2016	44.29	73,320,000,000	1.18	0.5	0.58
		2017	51.33	240,000,000,000	3.15	0.5	0.49
		2018	29.05	183,000,000,000	2.15	0.5	0.40
		2019	31.08	168,000,000,000	1.07	1.1	0.40
6	**FLOUR MILLS PLC**	2010	41.52	117,877,760,046	7.83	2	0.65
		2011	42.54	517,067,740,366	5.37	2	0.64
		2012	33.68	151,760,497,785	-5.4	1.6	0.54
		2013	22.53	207,554,570,292	3.73	2	0.59
		2014	23.09	93,518,840,867	4.28	2.1	0.55
		2015	21.63	54,584,466,310	0.35	2.1	0.58
		2016	17.13	48,522,441,446	3.97	1	0.57
		2017	26.36	118,911,472,574	3.75	1	0.69
		2018	24.75	94,719,138,499	3.52	1	0.53
		2019	20.08	80,777,793,438	4.71	1.2	0.56
7	**NATIONAL SALT COMPANY OF NIGERIA PLC**	2010	9.26	16,929,911,235	0.62	0.5	0.34
		2011	8.14	10,624,247,896	0.84	0.7	0.44
		2012	12.86	21,195,507,024	1.04	0.9	0.39
		2013	12.44	39,715,081,286	1.02	0.9	0.40
		2014	8.81	16,479,506,711	0.7	0.5	0.50
		2015	10.32	18,943,484,403	0.79	0.55	0.57
		2016	6.73	27,607,147,899	0.91	0.7	0.67

		2017	15.85	49,014,609,993	2.02	1	0.62
		2018	13.22	47,689,890,804	1.67	1	0.61
		2019	13.26	34,310,226,995	0.7	0.4	0.71
8	**CADBURY NIGERIA PLC**	2010	4.71	80,169,800,659	0.43	1	0.53
		2011	4.87	35,672,745,024	1.17	1	0.53
		2012	5.53	90,780,852,902	1.07	1.1	0.45
		2013	5.31	184,723,383,784	1.92	1.3	0.44
		2014	4.69	59,205,266,120	1.06	0.7	0.60
		2015	3.70	24,149,457,849	0.61	0.65	0.57
		2016	3.91	15,250,065,802	-0.16	0.35	0.61
		2017	5.21	29,431,424,745	0.16	0.16	0.59
		2018	5.58	18,782,019,620	0.44	0.25	0.54
		2019	5.94	14,855,788,939	0.57	0.49	0.53
9	**NESTLE NIGERIA PLC**	2010	7.02	243,445,656,431	19.08	10.6	0.75
		2011	6.98	353,255,185,266	20.81	10.33	0.70
		2012	6.98	554,859,376,400	26.67	12.55	0.62
		2013	6.68	951,187,502,400	28.08	20	0.63
		2014	6.83	801,969,962,961	28.05	34	0.66
		2015	6.26	681,684,376,720	29.95	27.5	0.68
		2016	6.96	642,051,564,120	10	19	0.82
		2017	8.74	1,233,365,201,549	42.55	25	0.69
		2018	9.06	1,177,094,534,220	54.26	47.5	0.69
		2019	8.79	1,165,125,421,875	57.63	45	0.76
10	**NIGERIAN ENAMELWARE PLC**	2010	6.43	2,702,937,600	1.18	0.4	0.81
		2011	6.52	2,292,998,400	1.39	0.42	0.71
		2012	6.71	2,151,705,600	1.01	0.45	0.48
		2013	6.07	2,044,627,200	1.17	0.45	0.46
		2014	25.11	2,016,115,200	1.36	0.45	0.60
		2015	21.58	1,886,860,800	1.17	0.45	0.74
		2016	23.96	1,858,348,800	2.11	0.45	0.82
		2017	56.61	1,471,852,800	0.71	0.45	0.76
		2018	55.19	1,680,307,200	-0.04	0	0.69
		2019	41.32	1,680,307,200	-3.18	0	0.73
11	**PZ CUSSONS NIGERIA PLC**	2010	9.41	100,056,021,534	1.68	0.86	0.34
		2011	8.66	111,173,357,288	1.64	0.52	0.31
		2012	9.14	111,173,357,288	0.61	0.43	0.23
		2013	13.74	146,907,650,665	1.23	0.56	0.26
		2014	7.65	94,497,353,671	1.01	0.61	0.55
		2015	7.55	102,041,260,057	0.55	0.61	0.45
		2016	5.56	57,571,917,153	0.1	0.5	0.42
		2017	8.42	81,791,827,127	0.56	0.5	0.53
		2018	6.03	87,747,542,695	0.41	0.15	0.55
		2019	5.88	22,433,195,304	0.15	0.5	0.47
12	**UNILIVER NIGERIA PLC**	2010	11.30	101,770,669,125	1.11	1.1	0.74
		2011	11.92	109,715,591,250	1.46	1.2	0.87
		2012	10.08	175,923,275,625	1.48	1.4	0.82
		2013	8.57	203,541,338,250	1.25	0.1	0.94
		2014	6.09	135,442,005,750	0.64	0.1	0.87
		2015	6.14	163,627,562,813	0.32	0.1	0.92
		2016	8.17	132,415,368,750	0.81	0.1	1.21
		2017	10.24	235,545,222,097	1.78	0.5	0.54
		2018	7.83	212,565,200,429	1.84	1.5	0.34
		2019	4.15	126,390,119,174	-1.29	1.2	0.28
13	**BERGER PAINTS PLC**	2010	5.61	169,938,389,041	2.03	0.5	0.38
		2011	5.62	74,772,891,178	1.05	0.7	0.35
		2012	4.17	207,090,416,117	0.83	0.7	0.38
		2013	3.78	219,676,021,517	0.71	0.52	0.30
		2014	3.79	151,027,264,793	0.38	0.7	0.32
		2015	3.05	140,300,662,410	1.14	0.75	0.34
		2016	2.65	167,203,676,027	0.77	0.75	0.37
		2017	3.17		0.85	0.5	0.39
		2018	4.92		1.11	0.5	0.38
		2019	4.09		1.55	0.65	0.39
14	**CHEMICALS & ALLIED PRODUCTS PLC**	2010	7.49	122,033,941,515	3.29	2	0.60
		2011	8.72	68,013,583,404	1.87	1.6	0.48
		2012	10.11	74,260,165,429	1.99	1.56	0.61
		2013	10.32	73,072,002,782	2.02	2.25	0.58
		2014	9.49	46,818,749,845	2.37	2.37	0.62
		2015	9.52	33,466,581,220	2.49	2.35	0.55
		2016	9.51	21,188,900,536	2.29	2.2	0.54
		2017	8.21	29,308,011,956	0.76	2.05	0.55

		2018	8.62	4,494,382,022	2.9	2.9	0.56
		2019	6.71	7,400,000,000	2.94	0	0.63
15	**DANGOTE CEMENT PLC**	2010	26.62	1,858,964,444,160	6.37	1	0.47
		2011	28.82	1,715,979,095,663	7.13	1.25	0.44
		2012	23.80	2,182,888,998,581	8.57	7	0.34
		2013	22.64	3,731,700,716,621	12.34	7	0.30
		2014	16.79	3,408,101,481,000	10.9	7	0.34
		2015	12.43	2,896,886,258,850	10.46	8	0.34
		2016	11.08	2,964,877,883,396	17.97	8.5	0.40
		2017	14.81	3,919,316,703,150	14.94	10.5	0.39
		2018	14.70	3,232,584,254,539	28.25	10.5	0.25
		2019	12.13	2,419,752,051,368	15.34	16	0.30
16	**DN MEYER PLC**	2010	4.29	1,023,129,338	-0.73	0.1	0.80
		2011	4.73	311,894,129	-0.19	0.1	0.75
		2012	5.17	451,809,252	-0.08	0.1	0.75
		2013	4.48	411,000,674	-0.08	0.1	0.76
		2014	3.34	253,596,161	-0.11	0.1	0.77
		2015	3.23	221,532,278	-0.25	0.1	0.72
		2016	3.03	338,454,743	-0.74	0.1	0.78
		2017	2.79	348,409,294	-0.54	0.1	0.84
		2018	2.44	293,659,262	-18.85	0.1	0.66
		2019	2.73	268,772,884	-19.06	0.1	0.84
17	**LAFARGE WAPCO PLC**	2010	10.86	129,819,200,043	1.63	0.25	0.52
		2011	10.67	175,683,648,059	2.83	0.75	0.63
		2012	12.36	345,184,000,460	4.87	1.2	0.55
		2013	10.99	241,628,800,322	9.34	3.3	0.42
		2014	11.34	440,914,514,955	8.28	3.6	0.20
		2015	8.80	186,523,237,473	5.94	3	0.21
		2016	10.07	250,296,559,591	3.94	1.05	0.37
		2017	7.08	69,418,404,253	-2.4	1.5	0.57
		2018	7.27	246,449,274,531	0.48	0	0.56
		2019	8.76	246,449,274,531	1.41	0	0.28
18	**CUTIX PLC**	2010	10.09	1,167,756,504	0.16	0.12	0.55
		2011	11.75	819,014,742	0.1	0.12	0.47
		2012	12.43	536,907,895	0.09	0.12	0.45
		2013	13.26	624,637,944	0.17	0.12	0.44
		2014	13.69	1,144,859,317	0.12	0.12	0.60
		2015	12.23	1,461,897,282	0.05	0.12	0.62
		2016	13.08	1,664,449,315	0.08	0.14	0.54
		2017	13.25	1,770,128,636	0.11	0.18	0.57
		2018	14.40	1,444,284,061	0.5	0	0.54
		2019	11.21	2,342,558,295	0.27	0.13	0.43
19	**BETA GLASS COY. PLC**	2010	6.63	7,789,563,760	2.95	0.38	0.41
		2011	6.66	6,354,644,120	3.55	0.38	0.38
		2012	5.87	5,249,706,000	2.66	0.38	0.45
		2013	5.62	7,214,595,960	2.95	0.38	0.49
		2014	6.61	13,889,222,160	4.78	0.62	0.41
		2015	5.64	26,723,503,400	3.98	0.4	0.35
		2016	6.34	15,914,108,760	7.6	0.98	0.35
		2017	7.94	25,653,563,320	8.23	1.07	0.34
		2018	7.94	34,148,087,600	10.11	1.3	0.36
		2019	9.14	26,898,493,600	11.16	1.67	0.34
20	**GREIF NIGERIA PLC**	2010	17.68	640,879,200	1.02	0.3	1.27
		2011	17.46	566,259,200	0.9	0.3	8.71
		2012	14.28	553,467,200	0.91	0.3	8.56
		2013	13.25	540,675,200	0.72	0.3	7.93
		2014	13.32	515,091,200	1.02	0.6	3.52
		2015	11.87	450,278,400	0.58	0.6	3.08
		2016	13.38	450,278,400	0.64	0.6	1.96
		2017	17.12	387,597,600	1.16	0	1.48
		2018	49.21	388,024,000	1	0	1.57
		2019	45.85	388,024,000	1.39	0	1.82

Source: Researchers' Compilation, 2021

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