

# Nexus between Human & Social Capital and Financial Performance: Evidence from Listed Multinational Companies in Nigeria

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**ABSTRACT:**The integrated report gives an accurate and comprehensive picture of the financial and non-financial performance and value generation of the company. In recent years, it has been seen that the use of human and social capital favorably impacts the financial performance of business organizations, particularly in emerging economies. This study investigates the impact of human and social capital on the financial performance of multinational corporations listed in Nigeria. The information for the study was obtained from the firms' public financial statements and the Nigerian exchange group (NGX). This study chose the Expo facto research methodology and positivist research philosophy since it is grounded on legitimacy theory. Among a population of twenty-four (24) multinational corporations listed in Nigeria, a sample of sixteen (16) companies were selected. Return on equity (ROE) was utilized as a proxy for financial success, while the independent variables of social capital (SC) and human capital (HC) were proxied by the social capital index and the human capital index, respectively. Revenue growth (RG) was employed as the study's control variable. Using the statistical software programme STATA 16, panel regression was utilized to estimate the data. The study indicated that social capital has a considerable impact on the financial success of listed multinational businesses in Nigeria, but human capital had little influence on their financial performance. The article argues that corporate social responsibility (CSR) policies should be legislated and maintained since they provide short-, medium-, and long-term benefits to stakeholders.

**Keywords:** Integrated Reporting (IR), Human Capital (HC), Social and Relationship Capital (SC), Financial Performance (FP), and Return on Equity (ROE).

## I. INTRODUCTION

In the past decades, research topics hinge on business activities with a keen interest in the economic benefits of businesses, the institutional environment of businesses, the effects of cultural beliefs on business operations, identifying and financing business opportunities, and so on (Duan et al. 2022; Fangqing et al. 2022; Oldfordet al., 2021; Ceciet al., 2020). Although these arrays of studies have created lines of literature, many businesses, size regardless has been faced with failure syndrome that threatens the existence of the business in the foreseeable future (Gordon, 2022). It is therefore not glaring, what is responsible for the failure of some businesses to achieve set objectives while others are quite successful, especially in the context of international businesses. Empirical results from contemporary studies of business successes and what is responsible have shown some indications that human capital and social capital play important roles in business operations and that these endowments create a positive business performance (Lee et al., 2022).

The business environment is laced with stiff competition across industries which causes a change in investment focus with an emphasis on assets that can add value to competitive advantage (Onoriode, 2022). It is therefore paramount for business organizations to explore possible areas that can give them a competitive edge to survive the high-level competition. According to Sultan et al. (2021), a company can achieve a competitive advantage and reach its goals by adopting a human development program and efficient usage of its personnel. This was buttressed by Valmohammadi and Shahrashoob (2022) where it was asserted that human resource policy development and program are special areas that a company can concentrate on to earn such a competitive advantage. A company differentiates itself from another through the quality of the human capital base available to it and which can provide a strong basis for its competitive position among competitors (Liu et al., 2020). To fulfill corporate objectives and, more crucially, to ensure the long-term survival and viability of the company, businesses optimize their employees through extensive human capital development initiatives (Onoriode, 2022).

Additionally, the personal traits of business owners and managers as well as their capacity for social interaction affect organizational effectiveness (Li et al., 2022; Frank, 2019). To augment knowledge and other organizational resources, social capital refers to an organization's capacity to capitalize on the social structures, networks, and memberships given through interpersonal or institutional connections (Ceci et al., 2020). According to Tacon (2019), social capital plays an important role in business operations in that it creates business opportunities through strong social networks which if harnessed can improve the profitability of the organization. These social networking opportunities typically take the shape of increased sales, access to suppliers, advertising opportunities, financial resources, and key choices, as well as involvement in group initiatives or collaborations (Ceci et al., 2020). Social networks may exist domestically and outside. Domestic social networks offer the required assistance, knowledge, materials, and structured relationships from the local context to establish an operationally favorable environment. A global network offers more distinctive options for international business, including industry trends, cutting-edge managerial expertise, and venture capital investment that boosts financial performance (Maglia, 2022).

The early proponents of the human capital theory were initially opposed to the idea that people should be viewed as property or that employees are in any way assets that belong to the owners of capital, which led to some disagreement over the concept of human capital in company management (Canry, 2020). However, the concept has now been given priority because of its role as a measure of a firm's performance. Nowadays, more investment is made in building capacity in terms of imparting knowledge than it was a half-century ago (Dai *et al.*, 2022). Although not all interventions build human capital and what is effective in one situation may not be effective in another, Dai *et al.* (2022) contend that investments in human capital can be profitable at many phases of life. In the view of Agyabeng-Mensah and Tang (2021), people are now recognized as contributing significantly to the improvement in financial performance and a considerable means of edging out competitors. This is because the combined capacity of the workforce is productively engaged. Companies that are successful in performing these activities increase their results. Companies that can effectively control their various human capital functions, such as talent acquisition, choosing, recruiting, building capacity, welfare, and compensation scheme for employees engender overall performance in a rapidly evolving society (Onoriode, 2022).

A recent development in the global context is the use of social capital to enhance corporate performance. Social capital has not received much attention as a source of funding, market and commercial knowledge, and competitive advantage. And understanding the connection between managers personal traits, societal influences, and company success is essential for a firm to thrive in the marketplace. The social standing of each manager and employee, as well as their interpersonal connections and social networks, are crucial in establishing social status relating to technical know-how and emotional intelligence (Harris & Brown, 2021). And the opportunity to better understand how organizations perform due to this relationship. Management needs to treat human capital and social capital seriously if they want to ensure the longevity of their company. Studies have shown that businesses with strong human capital are better able to take advantage of opportunities and launch initiatives that lead to the development of plans for new business lines because they are more self-assured and less fearful of taking chances. Social capital creates connections that make it easier to find opportunities and identify, gather, and distribute scarce resources inside an organization (Ceci et al., 2020; Ozgil, 2018). It is linked to emotional ties and connections between outside parties, which may have favorable consequences in attracting funding and fostering trust within the organization (Harris & Brown, 2021).

Even though social capital and human capital have been the subject of several studies, there is no conclusive proof that they influence financial performance (Youjia *et al.*, Mansaray et al. (2017; Racha&Menan, 2017). The result of the analysis from this research is an addition to the existing literature in the field of management and will provide a knowledge base for the management of multinational companies in Nigeria in deciding on how to improve performance. A review will provide insight into the need to build a social network and improve social status to open organizations up to opportunities. Because of the emphasis on social networks and status, very few researchers have examined the nature of the interaction between social capital and human capital variables. The linkages within a social network, the social status of human capital, and how these elements impact a firm's financial performance must therefore be addressed. Therefore, this study focuses on examining how social and human capital indexes affect a company's financial performance using data from listed multinational corporations in Nigeria. The following null hypothesis has been established to examine this relationship between human capital, social capital, and the financial performance of listed multinational companies in Nigeria:

**Ho<sub>1</sub>:** Human capital index has no significant effect on return on equity of listed multinational companies in Nigeria.

**Ho<sub>2</sub>:** Social capital index has no significant effect on return on equity of listed multinational companies in Nigeria.

## II. LITERATURE REVIEW

### Conceptual Clarifications

#### Human Capital

A key component of organizational performance is human capital, and it includes qualities like training, experience, and expertise that allow a variety of options (Mohtadi, 2022). Higher levels of education are positively correlated with performance, according to earlier research, whereas industry involvement, and previous employment history are associated with a firm activity. According to the human capital hypothesis, knowledge increases people's cognitive abilities, which boosts their production and efficiency potential (Nouira&Saafi, 2022).

Integrated reporting is a way of reporting that goes beyond traditional financial reporting by including information about a company's non-financial performance, such as its impact on the environment, society, and governance, in addition to its financial performance. Human capital and financial performance are closely related, as a company's human capital can have a significant impact on its financial performance. Therefore, integrating human capital and financial performance in integrated reporting can provide a more comprehensive understanding of a company's overall performance and sustainability (Mohtadi 2022). When integrating human capital and financial performance in integrated reporting, companies can report on a wide range of human capital metrics and how they impact financial performance. These can include Employee retention and turnover rates; Employee satisfaction and engagement levels; Investment in employee training and development; Diversity and inclusion statistics; Information about employee compensation and benefits; Number of employees and employee demographics.

Additionally, companies can also provide a narrative explanation of how their human capital management strategy aligns with their overall business strategy and contributes to their long-term financial performance and sustainability. This can help investors, stakeholders, and other interested parties understand how a company's human capital is a key driver of its financial performance and overall sustainability. Integrated reporting can also provide a more holistic view of a company's performance, by including not only the financial performance but also the company's impact on the society and environment, governance, and the company's strategy to manage risks and opportunities (Terrazas-Marín, 2018).

#### Human Capital Index

Human capital can be measured in various ways, including education and training; experience and skills; productivity and performance; income and earning potential; health and longevity. Human Capital (HC) is measured by the index: Revenue (RC) minus the cost of revenue (CR) divided by staff cost (SC) (Yusuf (2013). Mathematically Human Capital (HC) is shown as:

$$HC = [RC-CR/SC] \text{ Where; RC = Revenue; CR = Cost of revenue; SC = Staff cost}$$

#### Social Capital

Experts have overtime posited that the importance of social capital to a company's success cannot be overstated. Studies surrounding this idea have grown recently because of its inclusion in models of structural and cognitive social capital that can affect the expansion of businesses. According to Vincenzo (2022), social capital is the result of multi-complex networks that include friendship and business relationships and can have a variety of implications on performance (Vincenzo, 2022). Social interactions between family, friends, co-workers, and others can open to important resources including facts, impact, and harmony. Social capital is about the agreement, credence, and smooth operation of a firm. According to Menardo *et al.* (2022), social capital includes the environment, network of connections, level of trust between people, and social norms that support specific interpersonal interactions and behaviors as well as the conditions necessary for the growth of organizations and information exchange. Among other things, the idea of social capital explains strategic behavior and it is regarded as a multifaceted activity that demonstrates how context influences the capacity to reason and communicative talent. Ouakouak and Ouedraogo (2019) claim that it entails knowledge sharing that emphasizes cognitive and communication abilities in a particular setting. As a result, efficiency benefits resulting from positive feedback including new chances with minimal forgone costs are made possible by the emotional attachments of social capital inside activity groups. The sources of social capital, according to Majeed and Samreen (2021). are emotional ties and the variety of interactions that aid in bridging gaps between agents. Belief associations provide cognitive social capital, which contributes to corporate learning and opportunity exploration, and as a result, trust relationships should be viewed as a key social capital intermediate component.

Social capital within an organization serves as a reflection of individual personalities, and it is made possible by mutual and group trust to attain goals (Obeitoh, 2018). As an organizational resource, social capital can take the forms of cognitive, structural, and relational social capital. According to Gerolemou *et al.* (2022), social

capital is a term used to describe the interpersonal connections that goal orientation and mutual trust create within a company. It falls under the structural and relational social capital categories. The relational dimension of social capital shows how trust, honesty, and shared norms have the power to influence and facilitate business relationships and decisions to ensure the success of businesses (Majeed & Samreen, 2021). The networking pattern and channels of interactions are all covered by the structural aspect of social capital. Being dedicated to the organization's mission within a social network constitutes the cognitive component of social capital Gerolemouet *al.* (2022). In essence, relational social capital refers to extent of association in terms of belief and bonding while cognitive social capital is the degree of shared representation among stakeholders. Structural social capital essentially depicts the actual relationships among stakeholders in social networks irrespective of social standing (Menardoet *al.*, 2022).

### **Social Capital Index**

Social Capital Index is measured by the average value of 1 or zero (0) if a company discloses any of Local community Disclosure; Education Sponsorship Disclosure; Arts and Culture Disclosure; Sports Sponsorship Disclosure; Public Health Sponsorship Disclosure; Donations and gifts Disclosure; Health and Safety Disclosure; Workforce incident or accident rate Disclosure; Workforce gender diversity (Female workforce) Disclosure; Job creation for indigent people and local content Disclosure; Customer and Complaints Disclosure; Data Protection and Privacy Disclosure; Human Rights Disclosure; Discrimination/Equal Employment Disclosure and Quality/ISO Quality Assurance Disclosure, in an annual report of a company gets 1 and 0 otherwise.

### **Financial Performance**

The measure of financial performance is important for management (Sayyadi, 2022). This is because financial performance measurement provides a basis for determining the results individual departments have produced within the organization. Financial performance is an accounting-based metric that assesses a company's profitability using financial ratios including return on assets, return on sales, and return on equity (Sayyadi, 2022). It is common practice to employ financial performance indicators (Sayyadi, 2022). The social capital accessible to organizations determines how well firms perform, as social capital ensures it creates room for other forms of resources such as intellectual and financial resources, and they are critical to business success (Sayyed, 2018). Social capital can both supplement and replace these other essential capital resources, in addition to making them easily accessible (Huang & Fan, 2022).). Entrepreneurs might make up for their lack of or restricted access to financial and intellectual capital by filling in as a substitute thanks to their extensive network of contacts. Through the exchange of information and the lowering of transaction costs, social capital can additionally guarantee financial efficiency.

The social network of an organization affects the effectiveness and ease of mobilization of financial resources to run the affairs of the organization which in turn can influence its financial performance (Usmanet *al.*, 2022). Therefore, managers of the business are interested in positioning their organization in such a way that portends them in good light and creates a social network that will help them access financial support to keep the organization afloat. These loans are among the organization's internal social capital resources. Additionally, social networks are frequently relied upon for customer support and referrals that result in sales revenue. These social networks might also connect users to suppliers in their own personal network, ensuring lower costs for the purchase of raw materials, which would increase financial efficiency (Antonio & Zhao, 2022). Financial performance in this study is measured by Return on Equity which is an indicator of the company's ability to utilize shareholders' funds to generate adequate returns that maximize owners' value. Return on equity measures the rate of return on shares held by the company's shareholders.

### **Return on Equity**

As a proportion of shareholders' equity, return on equity (ROE) is the amount of net income that is paid out. According to Kirimiet *al.* (2022), it is one of the most popular and possibly the most generally utilized overall measures of business financial performance. The reason that ROE is so well-liked by investors is that it connects the statement of financial position shareholders' equity to the income statement's profit for the year. Because ROE is the result of a systematic financial ratio study (also known as Du Pont analysis) it has appeal to experts, money managers, and investors worldwide (Bhardwaj & Letourneau, 1998). An important financial ratio for equity investors is a return on equity. It provides a clear indicator of how effectively the company management generates value.

Return on equity refers to how much net income is allocated in relation to shareholder equity Kirimiet *al.* (2022). A corporation's profitability is assessed using return on equity, which demonstrates how much profit a company earns utilizing the capital owners have contributed (Johann *et al.*, 2022). One of the dominant reasons why a higher Return on Equity is desirable for evaluating performance is that it indicates that a firm is generating value for its investors if it is making profits at a rate that is higher than its cost of equity capital. A company's cost of

equity capital is an assessment of the return an owner anticipated from an equity instrument, like what a company's cost of borrowing is the yield a bondholder predicts from a debt instrument (Karikari & Dhliwayo, 2022).

According to Zhang et al. (2021) and Nailal and Rika (2016) Return on Equity (ROE) is calculated as the ratio of Profit After Tax (PAT) to Total Equity (TE). Mathematically represented thus;

$$ROE = PAT/TE$$

Where, ROE = Return on Equity; PAT = Profit after Tax; TE = Total Equity.

### **Revenue Growth**

According to Nursyazwani (2020) market share and revenue growth are better measures of financial performance, which is also a crucial component of a firm's overall business performance (Nursyazwani, 2020)). An informal company organization could benefit from a long-lasting competitive advantage that will increase the value of sales by building strong relationships with these social networks, which could manifest as devoted clients and suppliers. Strong external contacts, according to Abhi *et al.* (2022), allow businesses to get useful market information from trade groups and authorities, which helps them gain a larger part of the market. Such priceless market data contributes to the acquisition of outside knowledge (Nguyen, 2022). This method of knowledge acquisition allows a commercial company to incorporate concepts and subject-matter information obtained externally into an information bank that guarantees a competitive advantage (Falahat *et al.*, 2022; Mursid & Cedric, 2022).

Revenue growth refers to the increase in a company's revenue over a certain period. It is often used as a measure of a company's financial performance, as it indicates the company's ability to generate revenue and increase its market share Abhi *et al.* (2022). Financial performance, on the other hand, refers to a company's overall financial health and includes measures such as profitability, liquidity, and solvency (Nguyen, 2022). Revenue growth and financial performance are closely related, as revenue growth is a key driver of financial performance. A company that can grow its revenue over time is likely to be financially strong, while a company that is unable to grow its revenue is likely to be struggling financially. Holding revenue growth constant in this help establish and understand the relationship between human and social capital and the financial performance of listed multinational companies in Nigeria.

Kasogo (2020) defined Revenue Growth (RG) as the Current Year Revenue (CYR) minus Prior Year Revenue (PYR) divided by Prior Year Revenue (PYR) and is mathematically expressed thus:

$$RG = [(CYR - PYR) / PYR]$$

### **Empirical Review**

Onoriode (2022), evaluated the effect of human capital development cost on the firm financial performance of listed manufacturing companies in Delta State, Nigeria between the 2014 -2018 financial years. A longitudinal research design was adopted, and the data collected were analyzed using descriptive and inferential statistics. Secondary data, the panel in nature, were gathered from annual reports and audited accounts of these firms that were selected using a stratified sampling technique. The results revealed a significant influence and positive relationship between human capital investment, welfare cost, and financial performance of listed manufacturing companies. The study concluded that human capital development improves the financial performance of companies. It also, affirmed that manufacturing firms should invest in human capital development to be able to have a competitive edge over competitors to achieve wealth maximization objectives. The study recommended that the management of manufacturing firms operating in Delta state should increase their investment in human capital as an increase may positively impact their financial performance. Nigeria as a country has thirty-six (36) states and the Federal Capital Territory. The study only covered Delta State. In application of the findings of the study may not be generalized for the entire country because of the limited sample used in the study.

John and Cajetan (2022) examined the effect of human capital investment on the return on investment of listed deposit money banks in Nigeria covering 2010 to 2019 (10 years). The independent variables were proxied by staff cost, number of staff, and employee compensation to sales, while the financial performance was proxied by return on investment. Secondary data for this study was extracted from the sampled twelve (12) listed deposit money banks annual financial reports for the period studied. Use of the panel regression technique, it was found that staff cost, employee compensation to sales, and number of staff had an insignificant effect on return on investment. It was therefore recommended that banks should institute effective investment plans on various aspects of staff training, retraining, seminars, and workshops. Also, management should intensify initiatives, have a greater understanding, and balance the cost of maintaining the staff in the long run so that employee performance can be improved in the banking sector. Thus, the management should also find initiatives for greater understanding and a balance of the cost of maintaining the staff in the sector.

Lambe et al. (2021) examined the effect of human resources on the financial performance of listed oil and gas firms in Nigeria, from 2011 to 2020. The study adopted Expo facto research design and employed a purposive sampling technique in selecting 12 companies from the population of 14 listed oil and gas firms in Nigeria. Opened system, expectancy, and human capital theories were used in the study. Return on assets (ROA) is the proxy for financial performance, while human resources were proxied by employee remuneration, training and development cost, and medical and health expenses. A panel regression model with the aid of the statistical tool E-views version 10 was used for the data analysis. The study concluded that training and development costs positively and significantly influenced the financial performance of listed oil and gas companies in Nigeria. The study recommended that companies should commit more resources to human capital development because it improves the financial performance of companies in Nigeria. Hausman test was employed in deciding between the fixed effect model and the random effect model. However, there are two other relevant tests such as Breusch - Pagan Lagrangian multiplier (LM) tests to determine between the random effect model and pooled ordinary Least square model. Furthermore, Wald/Spam or Chow test determine between the fixed effect model and pooled ordinary least square model were not shown in the study. The study at hand used the Hausman test, Breusch - Pagan Lagrangian multiplier (LM) test, and the spam test in selecting an appropriate model for the interpretation of the result. In addition, inconsistency was observed during the period of the study. The period of the study stated in the abstract covers 2010 to 2021 while in the methodology and discussion and findings, 2011 to 2020 were used. The introduction of a control variable like the one in this study adds to the robustness when several control variables in the study were absent from this study.

Youjia et al. (2021) investigated the influence of venture capital syndication in China and the degree to which social capital affects success in the market. The study put forth a hybrid model that defines social capital at venture capital firms and establishes links between social capital and performance at venture capital firms. Syndicated online communities and the latent-variable model serve as the foundation for this concept. Qingke and Wind, two of China's top sources of financial information, provided the data that were gathered. From 2000 to 2015 is the sample timeframe. Three relationship-related hypotheses were developed as part of the study, and they were tested using the suggested hybrid model. The test results are supported by certain numerical simulations. According to the study, China lacks established social capital connections, which results in a weak correlation between social capital and financial performance at venture capital firms. The study recommended that the mutual benefits of teamwork, which are represented in system connectedness, must be accorded maximal focus while learning from social capital, which is expressed in network embeddedness, be prioritized. However, the analysis time frame covers only 2000 to 2015 having a piece of updated information would provide more insight into the relationships being investigated.

Dar and Mishra (2020) investigated the dimensions of social capital's effect on SMEs' financial performance in India. Regression analysis was utilized in the study to examine the survey's primary data, which was graded on a 5-point Likert scale. MS Excel was used to manage the data, and SPSS, a statistical tool for the social sciences, was utilized to analyze it. The best method for obtaining findings was multivariate regression analysis. Only four of the five social capital characteristics included in the literature, complicity, status, social connections, and personal connections have a positive and significant impact on the financial success of SMEs, according to this study's empirical findings. Accordingly, the study suggested managers work to maximize the advantages of social capital by simultaneously utilizing all four useful dimensional variables, such as complicity, status, social relations, and personal relationships, to achieve the best performance possible for their firms, particularly in the financial sphere. The data gathering method used in this study had the drawback of only capturing changes throughout time at a particular point in time. And only SMEs' financial performance was considered in the study. The study could have equally obtained information from secondary sources for better insight and understanding of the relationships being examined.

Nguyen and Ha (2020) studied how social capital and business performance are related causally. Three aspects of social capital namely, network linkages, trust, and shared visions used in the study's research approach. To verify the hypotheses, the study used structural equation modeling on a sample of 153 Vietnamese companies, which included one to two respondents from each company. Using a cross-sectional design, the study was conducted. Data collection for the study took place between 2018 and 2019, using convenience and snowball sampling techniques. The findings demonstrate that all three aspects of social capital were positively correlated with company success, with innovation and knowledge transfer serving as mediators. The study suggested creating a work climate that encourages openness and trust among employees. Therefore, managers should strengthen the network's connections while also ensuring that information is exchanged smoothly and effectively to prevent misunderstandings and disinformation that could prevent innovation and improve business performance. It was

determined that social capital greatly influences business success, with information sharing and corporate innovation serving as mediators. The study is, however, limited by the model's use of only three social capital dimensions, while additional variables may also have an impact on the results. The dataset is also restricted by convenience sampling and snowball sampling methods. This study may also have to deal with an inherent drawback of quantitative analysis.

Nuryanto et al. (2020) studied the effect of social capital and organizational culture on enhancing organizational performance. The study concentrated on Banten Province, Indonesia industrial chemical manufacturers because it has the third-highest concentration of chemical businesses in Indonesia. As research tools, questionnaires, interviews, and observations were employed. For the questionnaires, a Likert scale of 1 to 5 was applied, with 1 denoting strong disagreement, 2 being neutral, 3 being neutral, 4 being agreeable, and 5 denoting strong agreement. Various pre-existing constructs for latent variables are verified, the model's suitability and accuracy are assessed considering actual empirical evidence, and the causality of the factors observed in the model is tested. Partial least squares structural equation modeling (SEM PLS) analytic techniques were applied. 97 participants in the managerial. The results demonstrate a positive and strong link between social capital and organizational culture through competitive advantage and overall effectiveness. Competitive advantage enhanced the connection between social capital and corporate culture through operational efficiency. The study recommended that management should boost the social capital of current human resources by utilizing the indicators that are already in place, such as mutual regard, information exchange, similar objectives, accessibility, and sharing of experiences. Building up this social capital can help the organization achieve higher levels of dedication, financial outlook, social performance, and environmental performance. The study's shortcomings are due to the few respondents, with a large number of participants the outcome of the study can generalize.

Zaharie et al. (2019) evaluate foreign assignments, human capital resources, and multinational corporations' subsidiaries' performance in Central and Eastern European (CEE) nations. Data from 295 international subsidiaries were collected for this study across five countries in Central and Eastern Europe (CEE), namely Hungary, Romania, Poland, Serbia, and the Czech Republic. premised on the networking of 12 members of the CEE International Research Team, the study employed the convenience sample method. The researchers got in touch with the local subsidiaries, and a cover letter and an online survey were sent to a union representative in each nation. The research evaluated the subsidiary's human capital assets, managerial skills, knowledge transfer, and a range of many other descriptive data (region of operation, form of entrance, number of staff, and year of creation) using the model that was developed. By determining Cronbach's alpha coefficient, the internal consistency of each scale was investigated. Based on five items that were scored using a Likert scale with four options, a mean score index was created. According to the report, the subsidiaries in the five CEE nations perform better when CEOs' talents are prioritized, and human capital resources are available. The focus on the executive team's talents and the performance of the subsidiary, it was established, are positively correlated. Due to the convenience sampling method and use of a cross-sectional sample, the study has a restriction. As a result, there is a limit to how broadly the results may be applied outside of the sample. The management was urged that it was important to comprehend the worth of various resources for the subsidiaries located in CEE nations.

Ozigil (2018) investigated how the three facets of social capital affected the financial performance of Nigerian small- and medium-sized businesses. The study focused on the necessity of promoting social capital as a means of increasing the performance of SMEs and examined mutual trust, dependability, and reciprocity in social networks. Between January and March 2017, surveys were distributed in Kano, Lagos, and Aba markets to provide the study's empirical meaning. An easy sample approach with a response rate of 25% was used to collect a total of 155 samples out of 600 administered (200 per market). From earlier research on measuring the three aspects of social capital, a set of measurements was compiled. Utilizing revenue drive, cost advantage, and competitive advantage, firm performance was assessed. To guarantee that the score falls inside the cut-off of 0.6, the study ran a structural model and examined the factor loading of the indicators. The extent to which items distinguish different indicators of the measure was investigated using the Average Variance Extracted, Composite Reliability Scores, and discriminant validity of measures. The study's conclusions showed that relationship-based social capital makes it simpler to acquire finance since it fosters relationships based on mutual trust and honesty. Access to information is made easier by structural social capital, which improves market penetration and a healthy market share. On the other side, cognitive social capital aids businesses in gaining a competitive edge in the marketplace. To fully benefit, managers were advised to promote the development of high levels of social capital among their staff. The study concluded that to increase firm performance, social capital had to be promoted among enterprises. The importance of social capital in creating income through increased sales and competitive advantage cannot be overstated.

However, because the study is only focused on three major Nigerian markets, there is a need for additional research to cover wider scope in gaining an understanding of the relationships being examined.

Mansaray et al. (2017) assessed the impact of corporate social responsibility disclosure on the financial performance of firms in Africa. A sample of 158 companies was chosen from six African countries namely South Africa, Kenya, Nigeria, Morocco, Egypt, and Mauritius. The study cut across six industry sectors; content analysis was used for the corporate social responsibility disclosures. The financial performance was proxy by return on assets (ROA) and return on equity (ROE). Multiple regression analysis was employed in analyzing panel data from 2005 to 2015. Corporate social responsibility impacted the insignificantly financial performance of firms in Africa. In the short run, however, leverage, the volume of capital, company size, asset turnover, and interest rate affected financial performance significantly. The policy implication is that firms in Africa do not rely on corporate social responsibility practices, even though corporate social responsibility disclosure has not significantly affected financial performance. Given the numerous benefits of corporate social responsibility to the stakeholders and society at large. It is necessary to maintain the best practice of corporate social responsibility. The financial performance was decomposed into return on assets and return on equity while other financial performance measures may have been considered in the analysis. The study could have used currency fluctuation as the control variable because this transaction occurred in different countries in Africa which are susceptible to foreign currency risk. With the limited sample of six out of 54 countries in Africa used, the outcome may not be generalized for all African countries.

Racha and Menan (2017) studied the effect of corporate social responsibility disclosures on financial performance in the banking industry in Egypt from 2008 to 2011. Content analysis of the information sourced from the published financial statements of the banks. Corporate financial performance was measured by return on assets (ROA), return on equity (ROE), net profit margin (NPM), and earnings per share (EPS). The statistical package for social sciences (SPSS) was the statistical tool employed in the analysis. Pearson correlation and regression methods were used to establish the relationship between dependent and independent variables. The study found that corporate social responsibility disclosures have no impact on the corporate financial performance of banks in Egypt. The inability of the banks to disclose corporate social responsibility issues in their financial statements limits the study. It was conducted in 2017 with information from 2008 to 2011, the period of 2012 to 2017 was not considered in the study and no reasons were adduced for that effect. Having current and updated information may give a better insight into the relationships of the variables being appraised. Guidelines provided by the Global Reporting Initiative (GRI) on disclosures for corporate social responsibility is a globally accepted standard of measurement and disclosures, compared to the manually generated index used in this study.

Worlu and Onyinyechi (2016) investigated the effect of human capital development on the financial performance of banks in Nigeria from 2011 to 2015. Data for the study was sourced from the published financial statements of the banks and the Nigerian Exchange Group (NGX). A cross-sectional research design and multiple linear regression with the use of Statistical Package for Social Sciences (SPSS) for the data analysis. The study adopted the independent variables profit after tax (PAT) total revenue (TR) and net assets (NA) personnel development and welfare (PDW) as the dependent variable of the study. The study findings revealed that personnel development and welfare has not influenced profit after tax (PAT) total revenue (TR) and net assets (NA) personnel development and welfare (PDW). The study concludes that human capital development has no significant effect on the financial performance of banks in Nigeria. Despite the findings, it is necessary to invest in human capital development for better productivity. The model specification specified that profit after tax (PAT) total revenue (TR) and net assets (NA) are the independent variables of the study, this position agrees with the conceptual framework developed. The questions raised and the hypothesis developed are inconstant with the conceptual framework, model specification, and data analysis. Also, A critical look at the topic suggests that personnel development and welfare (PDW) is the independent variable, profit after tax (PAT) total revenue (TR) and net assets (NA) personnel development and welfare (PDW) are the dependent variables of the study as shown by the tests conducted and the results presented. The study used time series in the analysis. The study investigated ten banks for ten years with concur with a cross-section of banks over time. The appropriate analysis could have been panel analysis because the characteristics of the data confirmed the panel nature of the data. By time series it means an entity is studied over time, this condition is violated in the adoption of panel data to run time series analysis. Furthermore, the period stated in the methodology is 2011 to 2015 which differs from the period of 2006 to 2015 for the variables of selected banks' financial statements presented in the results and interpretation section of the paper.

## **Theoretical Discussions**

### **Human Capital Theory**

Nadezhina and Evduevskaia (2021) it is generally accepted that institutionalists like T. Schultz, Gary S. Becker, Jacob Mincer, and others profoundly affected the development of the human capital theory in the middle to

late 20th century. Adam Smith published his *Wealth of Nations* in 1776. In it, he made the following conclusions: (1) labor costs are impacted by both quantity- and quality-related factors, including (2) "obtained and helpful qualities of all the occupants or people in society;" (3) The procurement of such skills, by the servicing of the acquiring company all through his learning, study, or traineeship, every time charges an actual expenditure, that is a capital fixed and realized, whatever it may be, in the process of the acquisition. Karl Marx believed that the 2nd stage of social production, which focuses more on reproducing, advancement, and progress, was the production of the middle class (Koritskiy, 2000). One of the first economists to develop the concept of human capital was Jacob Mincer. He insisted that human capital, or skills and competencies, have a significant impact on how personal income is distributed.

It is generally accepted that Nobel Prize-winning economist Theodore Schultz created the intellectual foundation for the idea of human capital (Schultz, 1961). Schultz stated the following human capital theory posits in his writings: First, since it is a root of potential future revenues (both tangible and intangible), both for the employee and for the nation's economy, human capital is simply a business concept. The fact that an individual and their human capital are interdependent is the second most critical characteristic of human capital. Thirdly, investments in human capital are inexorably associated with opportunity costs, namely with income lost while attending school or receiving advanced training. Comes with specific in any organization is determined by "generic human capital," which refers to universal abilities like fundamental mathematics and literacy (Kuzminov, Sorokin, and Froumin, 2019). According to the human capital hypothesis, education impacts the marginal productivity of labor, which in turn determines wages. Due to methodological flaws such as the application of a specific theoretical lens, closed-loop modeling, incorrect use of mathematical tools, and multi-variate analysis of interrelated components, the human capital theory has, however, failed the test of reality since the 1960s. According to Islam and Amin (2022), the well-being of employees affects financial performance. Human capital drives financial performance and economic growth (Ragoobur&Narsoo, 2022; Sisodia et al., 2021; Paunovic, 2021). Since labor cost impacts human capital and consequently the financial performance of companies, human capital theory relates to the study at hand because it examines the effect of human and social capital on the financial performance of multinational companies in Nigeria.

### **Social Capital Theory**

The foundation of Bourdieu (1986) definition of social capital is the understanding that capital is not just monetary and that social transactions must consider "capital and profit in all their forms" (Bourdieu, 1986). Bourdieu's conception is based on theories of representational power and social replication. According to class, gender, and race, Bourdieu's review demonstrates structural limitations and perceived barriers to institutional resources. According to Bourdieu, social capital takes the form of advantages gained from social networks. James Coleman, an American sociologist, lived from 1926 to 1995. Coleman shared Bourdieu's view that social capital fundamentally resides in the social network of interpersonal relationships. Coleman (1988) made a connection between sociology and people's social behavior and the rational theories of economists that people act autonomously and in their own best interests. Social capital was regarded as a public good by Robert David Putnam (1941). Putnam asserted that the main stock defining the political culture of contemporary civilizations is social capital, which is essentially the "amount" of "trust" that is available (Claridge, 2015).

The social capital theory asserts that social relationships are resources that can lead to the development and accumulation of human capital (Hauberer, 2010). Social capital is a useful resource. Resources or assets rooted in a person's or a group's network of social ties are referred to as social capital. The social capital theory assumes that a person's family, friends, and associates constitute an important asset that can be capitalized in times of need, leveraged for capital gain, or enjoyed purely for the human interaction it affords. To understand the relationship between education and work in the Chinese setting, it is crucial to consider social embeddedness, including parental influence, institutional policies, and social capital (Yuyang& Mok, 2022). Social capital would be made clearer in a broader social framework that includes rivalry for resources between impoverished and non-deprived groups as well as the behaviors of all residents across communities. Social ties are not always found in neighborhoods (Stephens, 2008). social capital and associational membership are related (Hurtado, 2011).

### **Legitimacy Theory**

The legitimacy theory was developed by Dowling and Pfeffer in 1975. That legitimacy theory exists when an established value system is congruent with the value system of the larger social system of which the establishment is a part (Dowling & Pfeffer, 1975). The central tenet of legitimacy theory, as it is easily adapted in the literature on social and environmental accounting, is that to maintain successful organizational operations, managers must make sure that their organization appears to be operating following community expectations and is thus given the label of being "legitimate." Organizations are seen as being a part of a larger social structure and are

not thought to have any intrinsic claim to resources according to legitimacy theory. A right to resources must instead be "won" (Rohaida et al., 2020), and "legitimate organizations" can maintain their access to (or "rights") necessary resources.

Suchman (1995) distinguished between three categories of legitimacy: pragmatic, cognitive, and moral validity. The organization views legitimacy as a "resource" on which it depends to survive, and society bestows it on the organization (Deegan, 2019). It asserts that legitimacy theory is primarily made up of five important theoretical claims. Proposition 1 specifically tackles the relationship between authority and acquiescence. The subsequent propositions link organizational support (Proposition 2), public approbation (Proposition 3), and interactions (Proposition 4) and the social context (Proposition 5) with authority (Hamm et al., 2022).

Compliance with social norms is thought to be a prerequisite for legitimacy. A "social contract" contains community expectations rather than "neatly." The social contract expresses the opinions of a wide range of community members, and no one group overrides others in deciding what behavior is appropriate or inappropriate. For failing to meet societal norms, businesses would face sanctions (Deegan, 2019). It is worthy of note that in Nigeria disclosures on social and human capital and legitimizing corporate social responsibility are voluntary.

The study is anchored on legitimacy theory because of the social contract existing between companies and society to provide services that meet their expectations. Legitimacy theory underpinned the study of the nexus between human and social capital and financial performance in listed multinational companies in Nigeria because it provides a framework for understanding how companies can gain and maintain the approval and acceptance of stakeholders. This is particularly relevant in the Nigerian context, where multinational companies may face unique challenges in terms of building and maintaining relationships with stakeholders due to cultural, economic, and political factors. By using legitimacy theory as a foundation for the study, researchers can examine how the actions and practices of multinational companies in Nigeria may be perceived by stakeholders, and how those perceptions may impact the companies' financial performance. Additionally, legitimacy theory allows for the examination of how the companies may use their human and social capital to gain approval from stakeholders, which can lead to improved financial performance.

### III. METHODOLOGY

This study used an ex-post facto research design because the observations were based on data and information that already existed and were not changed or influenced by the researcher. Positivism was chosen as the research philosophy because data were collected, variables were put into context, and measurements of the variables were done objectively. As of December 31, 2021, the study's population was made up of 24 multinational companies that were listed on the Nigerian Exchange Group (NGX). Outliers in the return on equity datasets meant that eight companies had to be taken out of the study. So, the method of "purposeful sampling" was used. So, a sample of 16 listed multinational companies was used for the study. The secondary data came from the Nigerian Exchange Group (NGX) and the financial records of the companies that are available to the public. Panel data were used for this study because it looks at a cross-section of multinational corporations in twelve (12) sectors of the Nigerian Exchange Group (NGX) over ten (10) years (2012–2021). The Federal Government of Nigeria agreed that international financial reporting standards should start in 2012, which is why that year was chosen. The IFRS is an international standard that encourages companies to share all of their information with the public and all of their other stakeholders. According to the Nigerian Securities and Exchange Commission (SEC) and the Nigerian Exchange Group (NGX), companies' financial statements for the year 2021 are the most recent ones that have been made public. Multiple regression techniques were used to look at the data and figure out how intellectual capital and natural capital affected the financial performance of listed multinational businesses in Nigeria. STATA 16 was used as a statistical tool to help with the analysis.

#### Model Specification

The study adopts the regression model used by Paunovic (2021). and is represented as follows:

$$ROE_{it} = \beta_0 + \beta_1 HC_{it} + \beta_2 SC_{it} + \beta_3 RG_{it} + \epsilon_{it} \dots \dots \dots (1)$$

Where:

- ROE= Return on Equity
- HC= Human Capital Index
- SC = Social Capital Index
- RG = Revenue Growth
- $\beta_0 - \beta_{it}$  = coefficient of the regression

i = number of multinational companies

t = number of years

$\epsilon$  = Error term.

Dependent Variable: The dependent variable financial performance is proxied by Return on Equity (ROE).

Independent Variables are Human Capital (HC) and Social Capital (SC) proxied by Human Capital Index and Social Capital Index respectively.

The control variable is proxied by Revenue Growth (RG)

Table 3.1 below shows the study variables and their measurements.

**Table 3.1 Study Variables Measurement**

| Variable | Proxies                | Measurement  | Source(s)  |
|----------|------------------------|--|--|
| FP       | Return on Equity (ROE) | The ratio of Profit After Tax (PAT) to Total Equity (TE).  | Zhang <i>et al.</i> (2021).<br>Nailal and Rika (2016). |
| HC       | Human Capital Index    | Revenue minus cost of revenue divided by staff cost<br>HC = [RC-CR/SC]   | Yusuf (2013).  |
| SC       | Social Capital Index   | Social Capital Index is the average value of 1 or zero (0) if a company discloses any of Local community Disclosure; Education Sponsorship Disclosure; Arts and Culture Disclosure; Sports Sponsorship Disclosure; Public Health Sponsorship Disclose; Donations and gifts Disclosure; Health and Safety Disclosure; Workforce incident or accident rate Disclosure; Workforce gender diversity (Female workforce) Disclosure; Job creation for indigent people and local content Disclosure; Customer and Complaints Disclosure; Data Protection and Privacy Disclosure; Human Rights Disclosure; Discrimination/Equal Employment Disclosure and Quality/ISO Quality Assurance Disclosure, in an annual report of a company gets 1 and 0 otherwise. | Agbi et al. (2020).                                    |
| RG       | Revenue Growth         | Current Year Revenue   | Kasogo (2020).   |

| Variable | Proxies | Measurement  | Source(s) |
|----------|---------|--|-----------|
|          |         | (CYR) minus Prior Year Revenue (PYR) divided by Prior Year Revenue (CYR-PYR/PYR) |           |

**Source: Author’s Compilation (2022)**

The apriori expectation for the study is that the independent variables; human capital and social capital are expected to have a positive and significant effect on the dependent variable, return on equity.

**Table 3.2 Apriori Expectation**

| Independent Variable      | Sign         | Expected Probability Result (p) |
|---------------------------|--------------|---------------------------------|
| Human Capital Index (HC)  | Positive (+) | ≤ 0.05                          |
| Social Capital Index (SC) | Positive (+) | ≤ 0.05                          |

**Source: Author’s Compilation (2023)**

HC: 0≤p≤0.05; SC: 0≤p≤0.05

#### IV. RESULTS AND DISCUSSION

##### Descriptive Statistics

Statistics that describe the overall distribution of a set of data are called descriptive statistics (Jennifer & Brooks, 2021; Kothari & Garg, 2019). Here, the data from the study are described by the mean, standard deviation, and highest and lowest values. In Table 4.1, the variables of the study are described by their statistics.

Table 4.1 Descriptive statistics for roe, hc, sc, rg, W Test.

| stats       | roe      | hc       | sc        | rg       |
|-------------|----------|----------|-----------|----------|
| N           | 160      | 160      | 160       | 160      |
| mean        | .1724375 | 3.926563 | .4269375  | .0835625 |
| sd          | .2489089 | 3.189373 | .1465408  | .228116  |
| min         | -.51     | -8.34    | 0         | -.84     |
| max         | 1.87     | 20.54    | .79       | 1.2      |
| skewness    | 3.023923 | 1.956844 | -.0756656 | .8517936 |
| kurtosis    | 19.05998 | 11.70706 | 2.899554  | 9.32155  |
| Prob(Wtest) | 0.00000  | 0.00000  | 0.44989   | 0.00000  |

**Source: STATA 16 output Results based on study data**

According to Table 4.1, the average ROE of Nigerian-listed multinational corporations was N0.1723, with a standard deviation (SD) of 0.2489. This indicates a large dispersion in the data, with values for ROE of the studied businesses scattered widely about the mean by a margin of 0.2489 on both ends of the spectrum. Both -N0.5109 and N1.8728 can be used for the ROE’s lowest and maximum values. Return on equity (ROE) data is positively skewed with a coefficient of 3.02, indicating that the vast majority of the data are on the right-hand side of the normal distribution. Having a kurtosis coefficient of -19.06 indicates that the data is extremely non-normal, suggesting that it is not normalized to zero.

As part of the descriptive analysis, we used the Shapiro-Wilk (W) data normality test to check the distribution of our secondary source data. The purpose of the test was to determine whether or not a given variable followed a normal distribution curve. The purpose of this analysis is to examine the possibility that the data are not normally distributed at the 5% significance

level. When calculating return on equity, a p-value of 0.00 is obtained. Hence, the analysis finds that the data for return on equity (ROE) are not normally distributed since the p-value is less than 0.05 and the null hypothesis cannot be rejected.

Human capital (HC) for listed MNCs in Nigeria had an average of 3.9266 with a standard deviation of 3.1894 (see Table 4.1). This demonstrates that the sampled businesses' HC is separated from the mean by just 3.1894, indicating that the data is not extremely skewed to either extreme. The range of HC is from -20.54 to -8.34. Human capital (HC) data is 1.96-point positively skewed, implying that the vast majority of the data points lie on the right-hand side of the normal distribution. As evidenced by a kurtosis value much over 11.71, the data is highly skewed. Human capital (HC) has a p-value of 0.00, hence the study cannot rule out the possibility that HC data are not normally distributed (since this p-value is less than 0.05) and must therefore draw this conclusion.

Similarly, during the research period, the sampled businesses' mean value of social capital (SC) was 0.4269 and their standard deviation (SD) was 0.1465. This indicates a large dispersion of the data around the mean, with the SCs lying 0.1465 standard deviations from each extreme. Also, the SC ranges from 0.0 to 0.79%. With a skewness value of -0.08, most of the social capital (SC) data is somewhat to the left of the normal curve. The data is not normal, as evidenced by the kurtosis coefficient being 2.90, which is much over zero. The study indicates that the data for social capital (SC) is normally distributed since the p-value is larger than 0.05 and the null hypothesis that SC data is normally distributed is rejected (p = 0.45). In addition, Table 4.1 reveals that the sampled firms' average revenue growth (RG) is 0.0834, with a standard deviation (SD) of 0.8203 and a variance (VAR) of 0.2279. This demonstrates a large dispersion in the data around the mean, with RGs deviating by 0.2279 standard deviations on both sides of the mean. You can set the RG between -0.8448 and 1.1959. For RG, most of the observations lie on the right-hand side of the normal distribution (coefficient of skewness = 0.85). As the kurtosis coefficient is 9.32, it is clear that the data is significantly non-zero. Revenue growth (RG) has a p-value of 0.00. As the p-value is less than 0.05, the analysis finds that the data for revenue growth (RG) are not normally distributed, which is the null hypothesis. According to Gujarati and Porter (1995), data is considered "normal" if and only if it meets the BLUE (Best Linear Unbiased Estimator) requirements of having linear parameters, homogeneity conditions, homoscedasticity assumptions, and collinearity assumptions (2009). Return on equity (ROE), human capital (HC), and revenue growth (RG) all have p-values less than 0.05, suggesting that the data are not normally distributed; only social capital (SC) has a p-value larger than 5%, showing that SC data are normally distributed. Hence, instead of the more common t-test, we utilized the imtest to check for heteroskedasticity. Table 4.3 displays the findings of Cameron & Trivedi's dissection of the IM-test.

**Correlation Analysis**

It is the linear relationship between two variables that are being measured through correlation. The coefficient of correlation can take on values between +1 and -1, both of which are considered to be integer perfection. When the correlation coefficient is 0, there is no relationship between the two variables (Adefila, 2008). In the case of a positive correlation, a shift in one variable predicts a similar shift in the other. In a situation where the correlation is negative, a rise in one variable predicts a reduction in the other. Strong relationships between variables are indicated by a coefficient of correlation of 0.8 or above, as stated by Gujarati and Porter (2009). According to Hair et al. (2010), a 0.9 correlation, whether positive or negative, is a secure threshold.

Table 4.2

Results of correlation analysis for roe hc sc rg

|     | roe     | hc      | sc     | rg     |
|-----|---------|---------|--------|--------|
| roe | 1.0000  |         |        |        |
| hc  | 0.0769  | 1.0000  |        |        |
| sc  | 0.2055* | -0.1036 | 1.0000 |        |
| Rg  | 0.1476  | 0.2509* | 0.0694 | 1.0000 |
|     | 0.0625  | 0.0014  | 0.3833 |        |

**Source: STATA 16 output Results based on study data**

When two variables are correlated, it indicates how strongly they are linked. The accompanying table displays the relationship between the study's dependent and independent variables. Return on equity (ROE) and human capital (HC) are positively correlated by 0.0769 (7.69%), a number that is statistically insignificant at the 5% level (p = 0.3337). This means that an increase of one unit in HC is associated with a 0.0769 percentage point rise in ROE. Revenue growth (REG) has a positive association of 0.1476 (14.76%) with return on equity, which suggests that a unit increase in REG will cause an increase of 0.1476 units in ROE, which is insignificant at the 5% level as revealed by the p-value of 0.0091. In contrast, social capital has a weak positive association of 0.2055 (20.55%) with return on equity, which is significant at the 5% level.

**Multicollinearity Test (Variance Inflation Factor)**

When two or more independent variables in a regression model explain the same dependent variable, multicollinearity occurs. Multicollinearity refers to the degree to which two independent variables correlate with one another. Multicollinearity may be identified in regression analysis by use of the Variance Inflation Factor (VIF). The Variance Inflation Factor (VIF) quantifies the degree to which one independent variable's variance is inflated as a result of that variable's interaction with or connection with other independent variables (Folio et al., 2020; Gujarati & Porter, 2009). The results of the multicollinearity test, performed to identify whether there is strong multicollinearity between one explanatory variable and another, are presented in Table 4.3 below (s)

**Table 4.3 Results of VIF Test (Multicollinearity Test)**

| Variable | VIF  | 1/VIF    |
|----------|------|----------|
| hc       | 1.08 | 0.922326 |
| rg       | 1.08 | 0.927836 |
| sc       | 1.02 | 0.979567 |
| Mean VIF | 1.06 |          |

**Source: STATA 16 output Results based on study data**

**The decision rule:**

**H<sub>0</sub>:** Variance Inflation Factor (VIF) above 10 indicates that multicollinearity exists.

**H<sub>1</sub>:** Variance Inflation Factor (VIF) below 10 indicates that multicollinearity does not exist

When the Variance inflation factor (VIF) and tolerance value of the independent variables are both less than 10 and the tolerance level is less than 1 as shown in Table 4.3, the study rejects the null hypothesis and accepts the alternative hypothesis and draws the conclusion that there was no multicollinearity among the independent variables. A mean VIF of 1.06 further demonstrates that multicollinearity is not an issue with the variables.

**Heteroskedasticity Test**

Decomposing the IM-test proposed by Cameron and Trivedi provides a reliable way to test for heteroskedasticity in a regression model. One of the key concepts of linear regression is the hypothesis of homoscedasticity, which states that the residuals are assumed to have the same variance across all levels of the predictor variable. Once this assumption is broken, the regression's results are no longer valid, as stated by Gujarati and Porter (2009), who argue that heteroscedasticity is visible in the residuals (Gujarati & Porter, 2009).

The results of the heteroskedasticity test performed to determine if the data exhibit uneven variance are shown in Table 4.4 below. If the variance is homoscedastic, then the test will reject the null hypothesis and accept the alternative if it exists.

**The decision rule:**

**H<sub>0</sub>:** p-value associated with a heteroscedasticity test falls above a 5% significant level.

**H<sub>1</sub>:** p-value associated with a heteroscedasticity test falls below a 5% significant level

The decision rule is not to reject the null hypothesis if the P value is greater than 5% (0.05), otherwise accept the alternative hypothesis if the P value is less than 5% (0.05).

Table 4.4

Cameron & Trivedi's decomposition of the IM-test

| Source             | chi2 | df | p      |
|--------------------|------|----|--------|
| Heteroskedasticity | 5.85 | 9  | 0.7547 |
| Skewness           | 2.37 | 3  | 0.4989 |
| Kurtosis           | 1.45 | 1  | 0.2281 |
| Total              | 9.68 | 13 | 0.7202 |

**Source: STATA 16 output Results based on study data**

The results in Table 4.4 indicate that there is the presence of heteroskedasticity. Thus, modeler does require the use of robust standard errors instead of normal standard errors is used for its regression.

**Spam Test**

**The decision rule:**

**H<sub>0</sub>:** Pooled OLS regression model rather than a Fixed Effect model is appropriate

**H<sub>1</sub>:** Pooled OLS regression is not appropriate

H<sub>0</sub> should not be rejected and the Pooled OLS model should be accepted if the p-value is greater than 0.05, which corresponds to a 5% threshold of significance. If the probability is less than 0.05, then the Fixed Effect model is correct, and H<sub>0</sub> should be rejected.

To decide whether or not to utilize Pooled OLS regression or fixed effect regression, we ran a Spam test, the results of which are shown in Table 4.5 below. The test's null hypothesis assumes that the Pooled OLS Model is best, while the alternative hypothesis holds that the fixed effect model is better.

Table 4.5 Results of Spam test

|           | Chibar <sup>2</sup> | Prob.> chi <sup>2</sup> |
|-----------|---------------------|-------------------------|
| Spam test | 13.55               | 0.0000                  |

**Source: STATA 16 Output Results based on study data**

The study rejects the null hypothesis in favor of the alternative hypothesis and concludes that fixed effect regression is most appropriate based on the results shown in table 4.5 above, which show a spam test probability of Chi-square value of 13.55 with a corresponding P value of 0.000, which is less than 5% (0.05).

**Breusch-Pagan Lagrange Multiplier Test**

**The decision rule:**

**H<sub>0</sub>:** Pooled OLS is most appropriate than random effect.

**H<sub>1</sub>:** Random effect is most appropriate than pooled OLS.

When the Breusch-Pagan Lagrange Multiplier test statistic exceeds the significance threshold (5%), the null hypothesis (H<sub>0</sub>) is rejected. If the test statistic is lower than the threshold value (5%), the alternative hypothesis (H<sub>1</sub>) is accepted. Using the Breusch-Pagan Lagrange Multiplier (LM) test, we check if the model has random effects. Here, Table 4.8 displays the outcomes of the LM test used to decide whether pooled OLS regression or Random effect regression was more suitable.

Table 4.6 The Breusch-Pagan Lagrange Multiplier Test for Random Effects

| Var                     | sd = sqrt(Var)    |
|-------------------------|-------------------|
| roe                     | .0620005 .248999  |
| e                       | .0267949 .1636914 |
| u                       | .0306309 .1750169 |
| Test: Var(u) = 0        |                   |
| chibar2(01) = 147.07    |                   |
| Prob > chibar2 = 0.0000 |                   |

**Source: STATA 16 Output Results based on study**

Results are shown in table 4.6, which indicates a chi2 of 147.07, with a corresponding probability of 0.0000. This means that the investigation rejects the null hypothesis and comes to the conclusion that the random effect model is more accurate.

**Hausman Test**

A statistical technique called the Hausman test is used to decide which model—fixed effects or random effects—is best for interpreting and recommending the study's policy implications.

Hausman Test Decision Criteria:

**H<sub>0</sub>:** Random Effects model rather than a Fixed Effect model is appropriate.

**H<sub>1</sub>:** Random Effects model is not appropriate.

If the p-value is larger than 0.05, do not reject H<sub>0</sub> and conclude that the Random Effects model is appropriate.

If the p-value is less than 0.05, reject H<sub>0</sub>, and conclude that Fixed Effects are appropriate.

The findings of the Hausman test used to choose between random effect regression and fixed effect regression, are displayed in Table 4.7 below. In this test, the null hypothesis states that the fixed effect model is preferable, whereas the alternative hypothesis states that the random effect model is preferable. If the P value is larger than 5% (0.05), then the null hypothesis is accepted; if the P value is less than 5%, then the alternative hypothesis is accepted (0.05).

Table 4.7 ResultsofHausman test

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|             |        |
|-------------|--------|
| chi2(3) =   | 14.84  |
| Prob>chi2 = | 0.0020 |

---

**Source: STATA 16 Output Results based on study data**

The chi2 value of 14.84 in the preceding table from the Hausman test corresponds to probabilities of less than 5% (0.0020). (0.05). Inferring from this, the study is most suited to the fixed effect regression model.

**Autocorrelation**

The term "autocorrelation" is used to describe the consistency between separate data observations when the same variables are measured (Gujarati & Porter, 2009). That there are no serial (auto) correlation issues in the model was determined by running the Wooldridge test for autocorrelation in panel data, the results of which are shown in Table 4.8 below. The test's null hypothesis asserts that the model has no issues with serial (auto) correlation, whereas the alternative hypothesis asserts that there are such issues. If the p-value is more than 5% (or 0.05), the null hypothesis is accepted; otherwise, it is rejected.

Table4.8

Wooldridgetest for autocorrelation in panel data

---

|         |        |
|---------|--------|
| F(1,15) | 2.148  |
| Prob>F  | 0.1634 |

---

**Source: STATA 16 output Results based on study data**

The results in Table 4.8 shows an F value of 2.148 and a corresponding p-value of 0.1634 which is greater than 0.05 therefore the null hypothesis is accepted that the model is free of serial (auto) correlation.

**Fixed Effects Regression**

```

Fixed-effects (within) regression      Number of obs      =      160
Group variable: pid                   Number of groups   =       16
R-sq:  within = 0.0867                 Obs per group: min =       10
      between = 0.2338                   avg =      10.0
      overall = 0.1090                   max =       10
                                         F(3,141)           =      4.46
corr(u_i, Xb) = -0.4208                 Prob > F            =      0.0050
    
```

| roe     | Coef.     | Std. Err.                         | t     | P> t  | [95% Conf. Interval] |
|---------|-----------|-----------------------------------|-------|-------|----------------------|
| hc      | .0065059  | .0053852                          | 1.21  | 0.229 | -.0041402 .0171519   |
| sc      | -.3717806 | .138521                           | -2.68 | 0.008 | -.6456272 -.0979341  |
| rg      | .0868794  | .0611088                          | 1.42  | 0.157 | -.0339285 .2076873   |
| _cons   | .2982317  | .0668784                          | 4.46  | 0.000 | .1660178 .4304457    |
| sigma_u | .21996538 |                                   |       |       |                      |
| sigma_e | .16369143 |                                   |       |       |                      |
| rho     | .64358861 | (fraction of variance due to u_i) |       |       |                      |

F test that all u\_i=0: F(15, 141) = 13.55 Prob > F = 0.0000

**Source: STATA 16 Output Results based on study data**

Using an F-statistic of 4.46 and a Prob.>F of 0.0050, it was found that the model well explains the observed correlation. What follows is an explanation of the nature and scope of the correlation between the dependent variable and each of the study's independent variables.

**Ho<sub>1</sub>:** Human capital index has no significant effect on return on equity of listed multinational companies in Nigeria. The coefficient of 0.0065 explains the positive link between human capital (HC) and return on equity for the sample of listed multinational corporations across the research period. If you want to enhance your return on equity by a constant rate, all you need to do is raise your human capital index by one unit. As another finding, the human capital index of the selected enterprises was shown to have a negligible impact on the financial performance of publicly traded multinational corporations in Nigeria. A t-value of 1.21 and a P-value of 0.229 indicate that this is not statistically significant (at the 5% level). There was insufficient evidence to support the alternative hypothesis, hence the study concluded that HC does not significantly affect the ROE of publicly traded multinational corporations in Nigeria.

**Ho<sub>2</sub>:** Social capital index has no significant effect on return on equity of listed multinational companies in Nigeria. The correlation coefficient of -0.3717 between social capital (SC) and ROE for the sample of listed multinational corporations throughout the research period is statistically significant. Specifically, a drop in return on equity of 0.3717 percentage points may be attributed to an increase in social capital (SC) of 1 percentage point. The findings also showed that the financial performance of listed multinational corporations in Nigeria is significantly impacted by social capital. A t-value of -2.68 and a 5% significance level of P=0.008 demonstrate this. That's why the study concluded that SC has a substantial impact on the financial performance of listed MNCs in Nigeria after rejecting the null hypothesis and accepting the alternative hypothesis.

**Discussion of Findings**

Human and social capital's impact on the bottom lines of publicly traded MNCs in Nigeria was analyzed. Both human and social capital used is presumed to have a favorable and material impact on financial performance. The research concluded that the human capital of the sampled MNCs throughout the study period does not influence return on equity at the 5% (0.05) level of significance. John and Cajetan's (2022) findings that Human Capital (HC) has no substantial influence on financial success are consistent with ours. Human Capital (HC) was shown to not influence performance, in contrast to the findings of Onoride (2022), Lambe et al. (2021), and Zaharie et al. (2019). As a bonus, Worlu and Onyinyechi discovered that human capital does not affect the financial results of businesses.

Furthermore, the results showed that social capital significantly affects the financial performance of listed multinational corporations in Nigeria at the 5% (0.05) level of significance. According to past assumptions, the results are encouraging. Other research has also demonstrated that SC has a substantial impact on financial performance, including those of Dar and Mishra (2020), Nguyen and Ha (2020), Nuryanto et al. (2020), and Ozgil (2018). Social and Relational Capital (SC) was shown to have a positive influence on financial performance, which

contradicted the findings of Youjia et al. (2021) and Mansaray et al. (2017). Racha and Menan (2017), however, discovered that social capital does not influence banks' corporate financial performance.

## V. CONCLUSION AND RECOMMENDATIONS

Financial capital, natural capital, manufactured capital, intellectual capital, human capital, and social capital are the six capitals that make up integrated reporting. In this context, "integrated reporting" refers to a reporting system that is both complete and holistic, including financial and non-financial data and communicating that data logically and correctly to consumers of the information.

Thus, the goal of this research was to assess the impact of human and social capital on the bottom lines of publicly traded MNCs in Nigeria. The analysis spanned ten (10) years, from 2012 to 2021, and relied on data from the firms' publicly available financial records and the Nigeria Exchange Group (NGX). The inquiry was based on the principle of legitimacy. A comprehensive literature review was undertaken on the impacts of human capital and social capital on the financial performance of firms in Nigeria and internationally to identify the gaps and motivate the study. According to the findings, social capital has a positive effect on economic output.

It is concluded that human capital has little bearing on the financial results of publicly listed multinational firms in Nigeria. It is quite improbable that companies' bottom lines in Nigeria will increase as a result of the release of data about their human resources. Yet, research shows that social capital is a key factor in determining a company's bottom line in Nigeria.

The study concludes that the management of multinational corporations should continue and sustain the best practices of integrated reporting because doing so significantly improves financial performance, increases investment in social capital, and benefits business owners and other stakeholders over the short, medium, and long terms.

As the study only included large conglomerates, the results may not be generalizable if smaller listed firms are also included. In our analysis, we focused solely on human and social capital. Yet, additional elements including financial capital, manufactured capital, intellectual capital, and natural capital may affect the openness and success of firms. The data utilized was culled from company financial statements, while a shortened version of the same results may have been acquired from the Nigeria Exchange Group (NGX).

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