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# CULTURAL DIVERSITY AND OTHER ENVIRONMENTAL FACTORS ON PERFORMANCE EVALUATION OF INTERNATIONAL COMPANIES IN NIGERIA

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## ABSTRACT

This study examined the effect of cultural diversity and other environmental factors on performance of international companies in Nigeria; it specifically examined the effect of language differences, social factors as well as economic factors on financial performance of international companies in Nigeria. The study adopted an ex-post-facto research design and secondary data was gathered to analyze the relationship between the variables. The population of the study consisted on twenty-two (22) international manufacturing companies listed on the Nigerian Exchange Group as at 5th March, 2021; however; only eighteen (18) samples were selected from the population through purposive sampling. The data was collected from the annual audited financial reports of the eighteen (18) international manufacturing companies sampled for the investigation for the periods 2000-2020. Panel data was used which consists of 360 observations analyzed using multiple regression model. Robust regression model was used to test the effect of cultural diversity and other environmental factors. The Hausman test result revealed that social factor has positive and significant effect on financial performance with coefficient of 0.1171which is significant at 5% (p=0.041), economic factor has positive and significant effect on financial performance with coefficient of 0.0159 which is significant at 5% (p=0.370) while language difference has negative and insignificant effect on financial performance with coefficient of -0.1181 with (p=0.0490) at 5% level of significance. The study therefore, concluded that cultural diversity and other environmental factor have strong statistical relationship with the performance of the selected international companies in Nigeria. The study recommends among other things that language differences, growth rate, environmental cost, exchange rate and inflation rate are important variables to consider when the management of multinational companies decides to examine the effect of cultural diversity

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and other environmental factor on performance evaluation in Nigeria.

**KEY WORDS:** Cultural Diversity, Social Factors, Economic Factors, Political Factors, Technological Factors, Legal Factors, Ecological Factors

## INTRODUCTION

International corporations face societal and cultural challenges in many facets of their operations abroad. Despite the fact that society and culture are not directly involved in business operations, they nonetheless appear as critical elements shaping how the business is managed, including everything from product development and marketing strategies to the establishment of managerial and operational patterns and the success or failure of foreign subsidiaries. When expanding their operations to a new country, multinational corporations should keep in mind the cultural norms and expectations of the locals. Management at the parent business level, expatriate management at the subsidiary level, and management and workers in the host country all have different perspectives and values, which may lead to major operational issues (Ajami, Cool et al, 2006). As the globe has become more interconnected, cultural disparities in the workplace have also expanded. When members of a community have different racial, ethnic, linguistic, national, religious, and sexual identities, cultural distinctions emerge. The impact of cultural differences in organizations can only be comprehended by first gaining an understanding of the system of shared beliefs, values, customs, behaviors, and artifacts that members of society use to cope with the world and with one another, and that are transmitted from generation to generation through learning.. Commonalities in behavior include things like language, religion, values, norms, and practices among a certain population (Faranani, 2013). Cultures vary from one another in the extent to which its members commonly embrace specific values and attitudes rather than in the sort of those values and attitudes (Ang et al, 2007). Many facets of people's lives may be influenced by cultural norms, including what they eat, how they greet one another, what they wear, and how they develop relationships. Of course, it goes without saying that not

all national cultures are the same. Cultures may be identified on the basis of geography or area in many nations. As an example, various parts of Nigeria—the south, east, west, and north—tend to have quite distinctive
cultures.

There is a correlation between membership in certain identity groups or cultural affinities and overall company performance in numerous settings (Cox, 2004). A company's ability to innovate, solve problems, and communicate internally are all influenced by the degree of diversity present in its official and informal structures (Ang et.al, 2007). Cultural attitudes, conventions, and value systems significantly impact how individuals see their employment and their bosses. Seymen (2006) elaborates on this point, stating that it is definitely significant since beliefs shape actions. Whether or whether people's perceptions of their career prospects line up with reality, these perceptions nonetheless matter greatly (Kochan et al, 2003). Cox (2004) continues by arguing that cultural differences have a significant impact on an individual's worldview and how they interact with coworkers and clients.

A consensus seems to have formed those cultural differences, if handled well, may boost the efficiency and effectiveness of a company's operations on a global scale, but that they can have a negative impact on the success of a business if they are ignored or handled poorly. The goal of cultural diversity management is to harness the positive aspects of diversity while mitigating its negative effects on an organization's operations and its personnel (Stahl et al., 2010). Culture is both very resistant to change and extensively held and shared (Day, 2005). Despite the abundance of research on cultural differences and diversity, Canella, Park, and Lee (2008) point out that most of these studies have so far given conflicting findings, calling into doubt whether or not cultural variations were indeed favorable to firm performance. According to Ang et al. (2007), the diversity environment, rather than the reality of diversity itself, determines the nature of the influence of cultural differences on firm performance. Culture shock makes it hard to

capitalize on the company's general management and technical know-how, and cultural differences in the workplace make it harder for departments to share resources and create synergy with one another (Stahl, et al,, 2010). On the basis of this, the research analyzed the relationship between cultural differences and the success of international corporations operating in Nigeria.

This indicates that a company's environment is the whole of the circumstances and forces, both internal and external, that shape its existence, evolution, and future prospects. Economic, political-legal, social, and technical forces all have a role in the natural environment. Because the strategy formulation process takes into account emerging trends in the business environment, it is essential that the executives simulating the process have a thorough understanding of the external world and how it may affect the company in the future.

International corporations in Nigeria face challenges such as double taxes, currency devaluation, inflation, repatriation, expropriation, confiscation, campaigns against foreign products, obligatory labour benefit laws, abduction, and terrorism (Griffen, 2005). Due to high levels of insecurity and acts like cultural difference, leading to a high rate of abduction, government actions like regulatory, legal framework, and political changes may affect corporate performance. Inadequate literature and empirical data seem to exist in Nigeria that connects cultural diversity and other environmental performance to the success of MNCs, despite the fact that it is known that environmental variables have a connection with firm performance. An effort to explore this connection and broaden the horizons of this field of inquiry.

Furthermore, the sample size of these studies is so large because they include all the international firms listed on the Nigerian Group Exchange (NGE). No single industry was the focus of the research, and the results seem to be too broad. Different industries have different needs, yet they all have certain commonalities. Thus, the link between cultural

diversity and other environmental factors and business success cannot be accurately gauged by looking just at the share price at the conclusion of the fiscal year.

Taking return on investment as a measure of financial success on international corporations is an important component of company performance, and this research aims to fill a gap in the existing literature.

## LITERATURE REVIEW

### Review of Concepts

#### Culture Diversity

According to the definition provided by Shinnar et al., (2012) culture is "a collective programming of the mind that distinguishes the members of one group or category of people." They go on to argue that cultures display features such as unequal distribution of power, strong hierarchies, control mechanisms, and an emphasis to and obedience of those in positions of authority. Culture, according to Arowomole (2000), consists of "the beliefs, practices, attitude, and values of a people." Culture, according to Mohd (2005), is made up of people's ideas and ideals. Therefore, culture is concerned with the customs, doctrines, outlooks, and values of a society's members.

According to Hawkins et al., (2004) man acquires culture via participation in society. As time goes on, this way of life becomes the standard by which all members of that community are judged and compared to newcomers. Culture, according to Krakauer et al. (2002), is "a constellation of shared meanings, values, rituals, and patterns of interacting with others that shape how individuals interpret and make sense of the world they live in" (p. As a result, some customs and ideas will eventually become universally accepted as the norm, and very few people will challenge them. As the quote suggests, the young (would-be entrepreneurs) who are the backbone of any emerging economy

are mainly created even before they become engaged in activities that may be entrepreneurial.

Dissimilarities in culture arise when members of two or more culturally significant groups are portrayed as if they were part of the same social structure. Differences in cultural values, attitudes, customs, philosophy, etc., among a group of individuals in a certain setting are all included in this differentiation. Employees' perceptions of themselves and others, as well as their relationships with coworkers are influenced by factors such as their ethnic background, language spoken at home, sexual orientation, and religion. A culturally varied workforce is a direct result of Nigeria's status as an industrializing, multi-cultural country (Powell & Persico, 2005).

Since a nation "it comprised of citizens/inhabitants with varied cultural origins," cultural disparities are widely accepted as a feature of life, as argued by Hertzeberg (2010). Kundu (2001) stresses that success in both local and a global market depends on a company's capacity to cope with and absorb the advantages of cultural diversity towards the wealth of the business. Managerial events are seen differently depending on the culture of the person seeing them, according to Steven and Ogunji (2011). According to Ditomaso (2004), cultural norms serve as the mental operating system that distinguishes one social group from another. Taking this definition at face value, we may say that cultural variety is the existence of distinct cultural groups within a social system that exhibit distinctive patterns of belief, practice, and interaction. Therefore, there might be significant differences between members of various cultural groups (Ojo, 2009).

**Environmental Factors**

The abbreviation PESTLE is used to describe the external environmental elements. A strategic management process called environmental scanning makes use of this concept of macro environmental elements. Therefore, the PESTLE Analysis Model will be used to examine the external environment and its variables in this study.

P = Political Factors.

E = Economic Factors,

S = Social Factors,

T = Technological Factors

L = Legal Factors,

E = Ecological Factors

**Political Factors:** These include the level and kind of governmental action and control over commercial enterprises. Tax policy, labor legislation, environmental law, trade restrictions, tariffs, incentives, various encouragements, and political stability are all examples of political influences. Goods and services that the government would want to supply or have delivered (merit goods) and those that it would prefer not to have given (non-merit goods) may also be influenced by politics (demerit goods or merit bads). In addition, governments may significantly affect a country's healthcare system, educational system, and physical infrastructure (Chakroun et al., 2019)

**Economic Factor**; This include Exchange rate, unemployment, trends in demand and supply, GDP growth, interest rates on loans, currency exchange rates, and inflation rate are all examples of economic factors. The way in which companies function and make choices is profoundly affected by these elements. One factor that influences a company's ability to expand is the cost of capital it must incur to do so. Changes in the value of a currency may have a significant impact on an economy's export prices, as well as on the availability and cost of imported commodities (Chakroun et al., 2019)

**Social Factor**: Cultural factors include things like people's focus on health, the pace of population increase, the makeup of the population by age, their views on work and family, and the importance they place on safety nets. Company operations and product demand

are both impacted by societal shifts. The need for insurance services in a nation may grow as a result of factors such as an aging population, which may lead to a smaller and less enthusiastic labor force (and hence higher labor costs). Also, businesses may adjust their management practices in response to these shifting societal norms (such as recruiting older workers) (Bastik et al., 2022).

**Technological Factor**: The pace of technological development, as well as other technical factors like as R&D activities, automation, technology incentives, and the like, is included in this external environment factor. They may help find the least efficient production level, identify entrance hurdles, and affect outsourcing choices. Changes in technology have the potential to alter prices, quality, and to inspire new forms of creation, creativity, and competitiveness (Satika et al., 2021). .

**Legal Factor**: Included in this section are laws pertaining to discrimination, consumer protection, antitrust, the environment (which led to the creation of NESERA), workers' rights, and occupational health and safety. How a business runs, how much it costs, and how popular its goods are are all things that may be influenced by these external variables (Bastik et al., 2020).

**Ecological Factors**: This includes things like the weather, climate, and climate change, drought, earthquake, and erosion that may have an impact on businesses like tourism, farming, and insurance. An increasing public understanding of climate change's possible consequences is changing business practices and the goods they supply, opening up new markets while simultaneously threatening or eliminating others (Satika et al., 2021).

## Cultural Diversity Environmental Factors and Performance Evaluation

Cultural diversity is most likely to involve differences in perspectives, knowledge, and experience necessary for optimal information processing, decision-making,

and innovation. Culturally inclusive environment attracts and energize top global talent. A culturally diverse workforce can better understand and respond to the needs of customers across the globe. And a culturally diverse workforce can increase access to suppliers and add values to the environment where they run their business

Cultural attributes including nationality, race, or ethnicity are the most common social and environmental categories by which people sort themselves and others into in- or out-group members. Social categorization triggers stereotyping and other forms of bias. Bias threatens environmental harmony and productivity. Also, when our interpretative frameworks (cultural schema) are misaligned, we misunderstand or misinterpret each other. This can cause confusion, suspicion, and conflict.

Organizational Performance has been defined as the ability of an organization to fulfill its mission through sound management, its impact to its immediate environment and a persistent rededication to achieving results. Effective performance organizations are mission-driven, adaptable, customer-focused, entrepreneurial, outcomes oriented and sustainable (Mahapatro, 2011). While, according to Richard et al, (2009) Organizational performance comprises the actual output or results of an organization as measured against its intended outputs (or goals and objectives). Organizational performance involves the recurring activities to establish organizational goals, monitor progress toward the goals, and its environmentally friendly to achieve those goals more effectively and efficiently (McNamara 2006). Therefore, the need to measure organizational performance cannot be over-emphasized; as evaluation strikes a balance between success and failure.

To measure performance, one must look at how well an economic unit makes use of the resources it has at its disposal, irrespective of cultural diversity and how that use improves over time via research, and how one may compare the results of one period to those of another using a predetermined scale and set of predetermined criteria (Lin, 2010).In view

of this it si expected that cultural diversity and environmental factor have a significant impact on performance evaluation

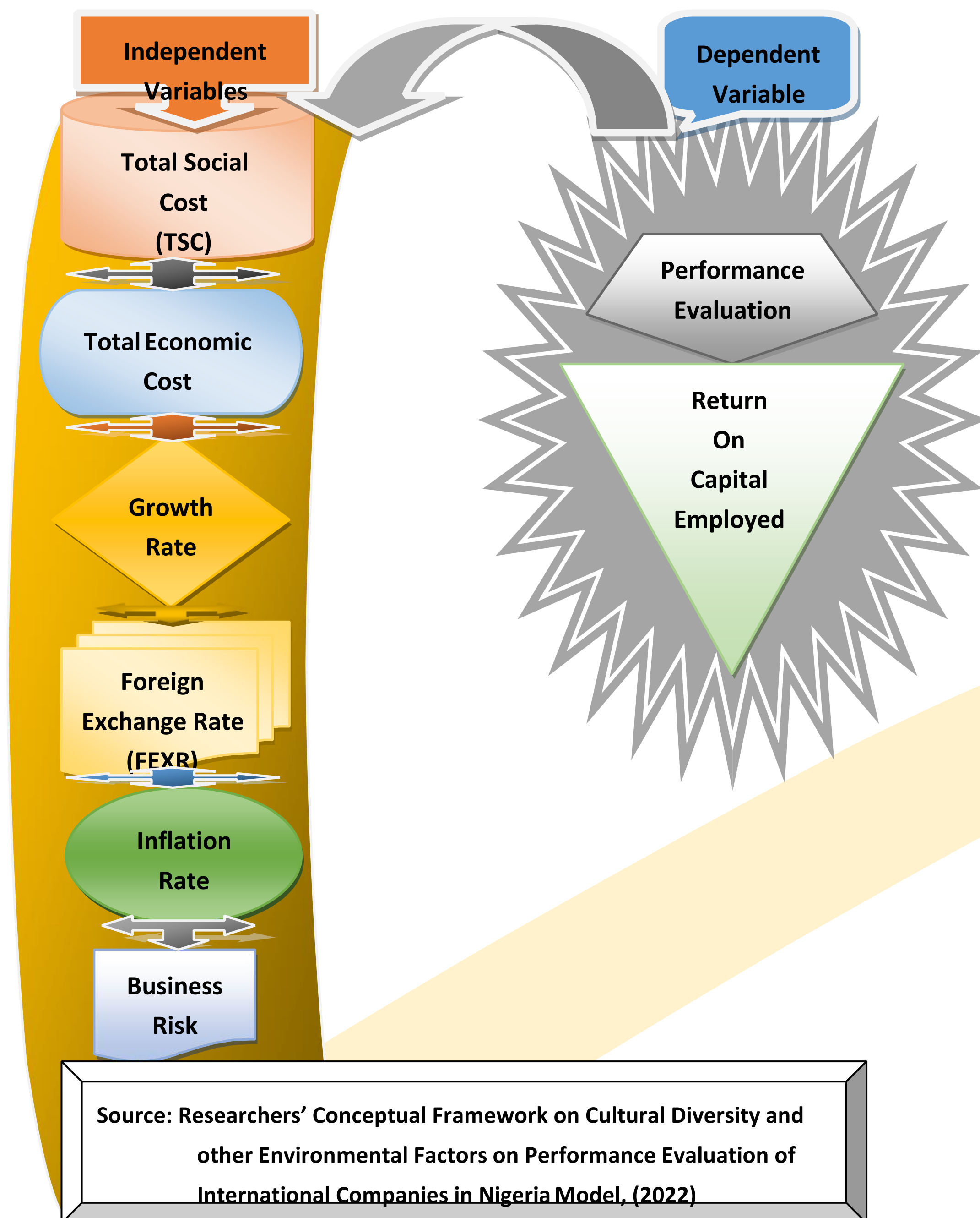
**Firm Performance**

This concept of "firm performance" is not new to the university or the boardroom, and it has been taught with a wide range of meanings. The degree to which a Firm achieves its aims and stated objectives via the strategies and policies of the Firm has been shown to be influenced by the performance of the Firm (Folan & Browne, 2005). The concept of firm performance rests on the notion that it is the result of the coordinated efforts of human, physical, and capital resources working toward a common goal (Barney, 2002; Carton & Hofer, 2006).

Return on investment is used as a proxy for financial success in this analysis. Return on Investment is one of the common financial performance metrics used in the academic literature. Tobin's Q is a ratio of market value to the replacement value of a company's assets that is used to evaluate financial performance, as defined by Sangno et al., (2016). (Sangno, 2017). Estimating and interpreting Tobin's Q as the value of market expectation of the underlying economic return that may be created from the corporate-owned productive assets, Tobin's Q can also be used as a measure of the long-term valuation of the multinational corporation (Dechezlepretre et al., 2017). Multinational corporations in the manufacturing sector may tap into superior sources of competitive advantage that are out of reach for their local counterparts. Given that many American manufacturers may not face as much enticing foreign competition for their market share, these are at least some of the options worth considering (Ding et al,2016). Moreover, multinationals' market performance improves as their foreign diversifications expand, since this gives

them a larger base from which to expand and a greater ability to exert their influence over relevant markets.

**Conceptual Framework on Cultural Diversity and other Environmental Factors on**




**Performance Evaluation of International Companies in Nigeria**

## Theoretical Review

This study was anchored on Blau's Theory of Heterogeneity. Peter Michael Blau, an American sociologist and thinker, first proposed this hypothesis. Based on his theory of heterogeneity, Blau (1977) proposed that businesses with high, medium, and low degrees of cultural variety would all have distinct dynamics and organizational results. It is more common for people from the same culture to form close bonds with one another and have similar worldviews since they interact with one another more often and in a wider range of settings. Group morale and consequent productivity are both boosted as a result. The research on group diversity has neglected to examine the factors that lead to the creation of work groups.

Since a more varied workforce means that various organizational groupings, including functional departments, may be experiencing greater gender and cultural diversity, this idea is important to the research. A diverse workforce does not guarantee a varied group composition in every firm. We could learn something useful about the relationship between group diversity and social structure from Blau (1977). Similarities on a single nominal characteristic (such as race) might facilitate friendships and other social bonds. People, he argues, will associate not just with those who share their own group but also with those who share their interests and values from other groups.

## Empirical Review

Irina (2017) examined the impact of cultural diversity on team performance. The data was analyzed using descriptive statistics. The findings indicated that ethnic teams perform better on average, are more creative, and provide novel ideas and viewpoints, but their members are less collaborative as a whole. Within ethnic teams, communication is more robust, but this hasn't been linked to improved performance.

Ukachukwu and Iheriohanma (2013) looked at how cultural diversity in the workplace in Port Harcourt, Nigeria, affected productivity. Therefore, the findings of this research provide important insight into how individuals' and teams' cultural orientations influence their efficiency in the workplace. The results and discussion were put through a chi-square test of significance. The results demonstrate that cultural diversity has a major impact on how well teams are formed and function. Thus, it has an effect on their efficiency.

Quality assurance agencies in Nairobi County, Kenya were studied by Rumana and Mutuku (2017) to see how demographic and cultural differences affected efficiency. Data was analyzed using a regression model and the Pearson product-moment correlation coefficient. The results showed a favorable and statistically significant correlation between age diversity and productivity. Similarly, there was a favorable and statistically significant correlation between cultural variety and productivity. Researchers in Kenya found that workplaces with a wide range of ages and cultures performed better overall.

In their study, Rubaii-Barrett and Beck (1993) compare and contrast Anglo-American and Mexican-American public servants in terms of their performance in the workplace and the factors that affect their productivity. Descriptive statistics and analysis of variance were used to examine the data in this research. Employees of Mexican ancestry report greater levels of satisfaction with personnel processes, according to the research. It has been shown that Mexican Americans make up the bulk of the workforce. This suggests that cultural differences, rather than a numerical minority status, account for the apparent variations in work attitudes between the Anglo workers and everyone else.

Nguyen and Kim (2019) looked through the literature of international business, corporate business management, corporate strategy, and finance over the last fifty years to find examples of how environmental factors have impacted the financial performance of

multinational firms. The study used a critical review approach, based on inductive exploratory qualitative research methodology and pragmatic content analysis.

We analyzed 160 empirical papers from 43 academic publications and 58 classic books on the topic of multinationalism to compile this analysis. Several inconsistencies were shown to be the root of the differences and confusion encountered in empirical research. The results showed that there was a favorable and statistically significant association between environmental factors and financial results. For future studies, valid suggestions were offered for dealing with the discrepancies found. Nguyen and Kim's (2019) finding agrees with those from earlier research on cultural variety. As with the findings of, these researchers discovered a statistically significant favorable impact on company valuations (Sartika et al., 2021).

Sartika et al., (2021) worked on how activity ratios affected the value and profitability of multinational automakers. The research used secondary data collected from automobile firms in Indonesia over the course of four years (2009-2012). Several measures influencing corporate value and profitability were taken into account, including domestic diversification and stock return. Study data was analyzed using both
descriptive statistics and inferential analysis. Purposively chosen automotive firms in Indonesia were studied, and it was shown that activity ratios had a positive, significant influence on firm value, whereas stock returns had a negative, significant effect on firm value and corporate profitability throughout the time period studied. The management of the firms was admonished to pay close attention to stock returns and the actions that would cause stock returns and profitability. In line with the findings of the research, this outcome Grant et al., (2020), although contradictory to the study's findings (Sartika, 2021). As a result, most studies of cultural diversity's effect on business success fail to account for the impact of local conditions. Therefore, there is an issue with the fact that many studies have only examined how cultural differences in the West affect workplace efficiency. Consequently, there is a lack of understanding of the Nigerian cultural

environment and its impact on business success. Issues linked with cultural differences in multinational corporations have received less attention than the impact of cultural differences/diversity on the workforce. Additionally, there has been a lack of current research on how cultural differences affect productivity at multinational corporations in Nigeria. With this in mind, we set out to investigate the link between cultural diversity at MNCs and external determinants in Nigeria's business climate on the one hand, and dividend policy for publicly traded MNCs on the other. In this research, we focus on macroeconomic factors to see how they affect our chosen model's ability to explain our data.

## METHODOLOGY

The expo-facto approach was used to account for the impact of cultural diversity and other environmental factors on financial performance. The sample for this analysis consisted of 22 publicly traded, multinational manufacturing corporations in Nigeria. Secondary data was gathered from the relevant time period's audited financial statements of the chosen manufacturing enterprises. Descriptive and inferential panel analysis was used to analyze the data. The sample size covered eighteen companies representing 80% of the population were purposively selected and studied for a period of 20 years giving 360 firm observations which are "7-Up Bottling Comp. Plc. Cadbury Nigeria Plc, Tyre & Rubber Plc, Fidson Healthcare Plc ,Glaxo Smithkline, Consumer Nig. Plc, Greif Nigeria Plc, Guinness Nig Plc, Lafarge Africa Plc, Meyer Plc., Nemeth International Pharmaceuticals Plc, Nestle Nigeria Plc., Nigeria-German Chemicals Plc, P. Z. Cussons Nigeria Plc, Portland Paints & Products Nigeria Plc, Unilever Nigeria Plc., Vitafoam Nig Plc., Nigeria Breweries Plc Nigeria-German Chemicals Plc. This study used secondary sources of data collection

Financial performance was surrogated using return on investment. Hence return on investment (Dependent Variable), cultural diversity and environmental factors

(Independent Variable) were measured using total social cost, total economic cost, growth rate, foreign exchange rate, inflation rates and business risk.

**Table 1 Measurements of proxies for variables of the study**

| S/N | VARIABLES | SYMBOL | MEASUREMENT | PREVIOUS STUDIES |
|---|---|---|---|---|
| | | | | |
| | **Dependent Variable** | | | |
| 1 | Return on Investment | ROI | | Bastic et al., (2020), Becchetti et al., (2018) |
| | **Independent Variables** | | | |
| 1 | Total Social Cost | TSC | Total environmental cost divided by total cost of society | Selcuk (2019); Ang et al., (2007) |
| 2 | Total Economic Cost | TEC | Total cost of each activity divided by total operational cost | Satika, (2021) |
| 3 | Growth Rate | GWR | Total amount spent on expansion of business | Satika, (2021) |
| 4 | Exchange Rate | FEXR | Exchange Rate as a result of language differences | Abdi and Aulakh, (2018); Abdi et al., (2020); Abiahu et al., (2018) |
| 5 | Inflation Rate | INFR | Inflation Rate as a result of language difference | Adegboyegun, et al., (2020); Aguguom (2021); Akben-Selcuk (2019); Ang et al., (2007) |
| 6 | Business Risk | BR | Business Risk | Bastic et al., (2020); Becchetti et al., (2018) |

**Source: Authors' Compilation, (2022)**

## Model Specification

The study adopted a similar regression model from the study of Satika, (2021) which was modified to capture the relevant variables supported with empirical evidence. This model

aided in the testing of the study's stated hypothesis as well as the achievement of the stated objective. The model's functional specification is written as follows:

ROI = f (TSC + TEC + GWR + FEXR + INFR + BR) The

econometric specification is as follows:

$(ROI)it = b0 + b_1(TSC)\ it + b_2(TEC)\ it + b_3(GWR)\ it + b_4(FEXR) + b_5(INFR)\ it + b_6(BR)\ it + \varepsilon it$

ROI= Return on Investment, TSC = Total Social Cost, TEC = Total Economic Cost, FEXR = Foreign Exchange Rate, INFR = Inflation Rates, GR = Growth Rate, BR = Business Risk $b_0$ = Intercept for X variable of company

$b_1 – b_9$ = Explanatory variable coefficients for businesses that show how they are related to the dependent variable (or parameters), e = Error term i = cross sectional variable t = Time series variable

In this research, both descriptive and inferential statistics were employed to analyze data collected from 2000 to 2020. In this study, inferential statistics such as correlation and regression analysis were used. Pearson correlation was used to determine the strength of the links between the variables of interest, and the hypothesis was evaluated using the panel data regression technique to look into the connection between the explanatory factors and the dividend payout ratio.

## RESULTS AND DISCUSSIONS

A sample of multinational corporations operating in Nigeria was analyzed, chosen on the basis of the data that was readily available. The descriptive statistics for the variables in this investigation are shown in Table 2.

**Table 2: Descriptive Statistics for the selected multinational firms**

| Variables | No of Observations | Mean | Standard Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Return on Investment | 360 | 0.4250 | 0.4660 | 0.0000 | 2.0200 |
| Total social cost | 360 | 0.0355 | 0.1930 | -0.7300 | 1,7300 |
| Total economic | 360 | 7.7456 | 0.5215 | 6.0800 | 9.0800 |
| cost | | | | | |
| Growth rate | 360 | 42.7500 | 12.5557 | 12.0000 | 69.0000 |
| Foreign Exchange Rate | 360 | 0.2138 | 0.5331 | -0.6700 | 3.8100 |
| Inflation rate | 360 | 0.7390 | 0.2710 | 0.1000 | 2.4800 |
| Business risk | 360 | 1.09000 | 0.9251 | 0.1900 | 9.5700 |
| Valid N (Listwise) | 360 | | | | |

**Source: Authors' Computation, (2022)**

Table 2 shows that the average return on investment of multinational companies in Nigeria is 42.50%, with a minimum of 0.00 % and a maximum of 202.00 %, and a standard deviation of 46.60 %, indicating that the return-on-investment deviates significantly from the mean on both sides by 46.60 % among multinational companies listed on Nigerian Exchange Group (NEG).

Total social cost, total economic cost, growth rate, foreign exchange rate, inflation rate and business risk have mean values ranging from 3.55 per cent to 44.87 percent, with standard deviations of 0.1930, 0.5215, 12.5557, 0.5331, 0.2710 and 0.9251respectively. This indicates a wide variation in the measures of cultural diversity and other environmental factors among the selected multinational companies.

## Analysis of Correlation

Table 3 displays the correlation matrix for the variables used to investigate the association between six (6) explanatory variables and the return on investment (dependent variable), as well as between explanatory variables.

**Table 3: Correlation Matrix of all variables (2001 -2020)**

| | ROI | TSC | FEC | GRT | FEXTR | INFR | BR |
|---|---|---|---|---|---|---|---|
| **ROI** | 1.000 | | | | | | |
| **TSC** | 0.0767 | 1.0000 | | | | | |
| **TEC** | 0.0953 | -0.052 | 1.0000 | | | | |
| | | 3 | | | | | |
| **GRT** | 0.3868 | 0.3603 | 0.4718 | 1.0000 | | | |
| **FEXTR** | 0.0188 | 0.0313 | -.1685 | -.2902 | 1.0000 | | |
| **INFR** | 0.0985 | -.2750 | 0.0074 | 0.0001 | -.1431 | 1.0000 | |
| **BR** | 0.0750 | 0.0715 | -.0968 | -.0599 | 0.0637 | -.4660 | 1.0000 |

**Source: Authors' Computation, (2022)**

The explanatory variables' correlation coefficients range from -29.02 per cent to 47.18 per cent, indicating the relative strength of the linear association between them. Multicollinearity, according to Gujarati (2004), is only a problem if the pair-wise correlation coefficient among regressors is more than 0.80. Table 3 shows that the majority of cross-correlation terms for the explanatory variables are modest, indicating that there is minimal basis for concern regarding multi-colinearity among the explanatory variables.

## Multicollinearity Test

When utilizing the panel least square estimate method, one of the implicit assumptions is that the exogenous variables are not fully or nearly perfectly associated with one

another. The explanatory variables are said to be orthogonal to one another if they have no relationship with one another. Variance inflation factor(VIF) is displayed by Table 4 to show the relationship between the independent variables. The VIF of each variable is less than 10, indicating that there is no concern about multicollinearity among them. The average VIF is similarly less than 10.

**Table 4: Variance Inflation Factor**

| Variable | VIF | 1/VIF |
|---|---|---|
| **ROI** | 1.19 | 0.8410 |
| **TSC** | 1.46 | 0.6832 |
| **TEC** | 1.84 | 0.5435 |
| **GR** | 1.14 | 0.8799 |
| **FEXTR** | 1.45 | 0.6876 |
| **INFR** | 1.31 | 0.7613 |
| **BR** | 1.32 | 0.7557 |
| Mean VIF | 1.33 | |

**Source: Authors' Computations (2022)**

### Heteroskedasticity Tests

An attempt was equally made in this study to test for violation of the assumption of homoscedasticity (constant variance) of disturbances using Breusch-Pagan/Cook-Weisberg test for heteroskedasticity, the chi result of 1.14 with p-value of 0.2849 confirmed the constant variance of the data set.

### Regression Analysis

The standard procedure for regression analysis is to run the pooled ordinary least square (OLS) model, fixed effect (FE) model, and random effect (RE) model, and then decide which of these models is best for this study. The choice of whether to use the random effects (RE) or fixed effects (FE) model for this investigation was made based on whether the individual effects were fixed or random. Between fixed effects and random effects,

the Hausman test was used to determine which model was most suited. As evidenced by prob (0.0044) less than 5% threshold of significance, the Hausman test suggests that the fixed-effects model is suitable.

Therefore, Table 5 displays the results of the pool OLS, fixed-effects, and random-effects models for the effect of firm-specific attributes on dividend policy of the sampled listed multinational firms in Nigeria. The R2 value of 0.2451 (25 per cent) indicates that the sample regression line showed roughly 25% fitness. Furthermore, the explanatory variables (TSC, TEC, GR, FEXTR, INFR and BR) together explain about 25% of the total variation in the cultural diversity and other environmental factor of the examined multinational companies. The F-statistic (9, 99) = 1.87 and P-value 0.0424 suggest substantial statistical significance at the 0.05 level of significance, implying that the model is reliable and valid. The following is an explanation of each explanatory variable in relation to the explained variable (ROI).

**Table 5: Regression Result for Effect of cultural diversity and other environmental factors Financial Performance of International Companies in Nigeria.**

| Variable | Pooled OLS | Fixed Effect Model | Random Effect Model |
|---|---|---|---|
| **Constant** | -0.2077<br>(0.754) | 1.5886<br>(0.029) | -0.2077<br>(0.753) |
| **ROI** | 0.1998<br>(0.386) | 0.0381<br>(0.003)* | 0.1008<br>(0.384 |
| **TSC** | 0.0218<br>(0.808) | 0.1171<br>(0.041)* | 0.0218<br>(0.807) |
| **TEC** | 0.0125<br>(0.001)* | 0.0159<br>(0.370)* | 0.0125<br>(0.001)* |
| **GRT** | 0.1407<br>(0.072) | 0.0824<br>(0.237)* | 0.1407<br>(0.069) |
| **FEXTR** | 0.2681<br>(0.176) | -0.1181<br>(0.490)* | 0.2681<br>(0.174) |

| | | | |
|---|---|---|---|
| **INFR** | 0.0799 (0.101) | -0.0942 (0.030)* | 0.0799 (0.098) |
| **BR** | 0.0042 (0.291) | 0.0016 (0.387)* | 0.0042 (0.289) |
| **F-Statistic** | 3.67 (0.0005)* | 1.87 (0.0424)* | |
| **R-Square** | | 0.2451 | |
| **Wald $X^2$** | | | 33.02 (0.0001)* |
| **Hausman Test** | | 23.95 (0.0044)* | |

*denotes 5% level of significance.

( ) denotes Prob., while the value denotes coefficients of the variables. **Source: Authors' Computations, (202)**

The effect of Total social costs on dividend policy is positive (0.0381) and statistically significant (P-value of 0.003 at 5% level of significance) when using the fixed-effect model as evidenced by the Hausman test result. This means that return on investment will have a favorable impact on total social cost of selected multinational companies. The result suggests that a 1% increase in financial performance as measured by return on investment will result in a 3.81 percent increase in the total social cost of the chosen firms. The relationship is predicated on the assumption that profitable companies are better positioned to meet any social and environmental demands irrespective of language difference, while still having sufficient resources to meet up with other economic obligation. This finding is in agreement with the findings of Aguguom, (2021). Akben-Selcuk, (2019). Ang et al., (2007), Antonia et al., (2019), Bardos et al., (2019), Bastic et al., (2020), Becchetti et al., (2018). who also established positive relationship between financial performance and return on investment.

The marginal impact coefficient (0.1171) with p-value (0.041) at the 5% level of significance indicates that return on investment has a positive and significant effect on total economic cost of the selected firms, according to the OLS model. This means that for every 1% rise in return on investment, the total economic cost of the selected firms will grow by 11.71 percent.

The reason for this is that international companies must meet up with their economic and legal obligation irrespective of their cultural diversity or religious colour due to the significant impact in the society where their business activities is being run. Large companies have a competitive advantage over small companies because they are well-known in the capital market, have a high credit rating, and can readily manage environmental cost . This finding is congruent with those of Pandy (2001), Uwuigbe (2013), Muhammad & Muhammad (2016), who found a statistically significant positive association between return on asset and environmental cost.

The results also reveal that return on investment has a positive and substantial impact on the growth rate of the selected firms, as evidenced by the marginal effect coefficient (0.0942) and p value (0.030) at the 5% level of significance. This shows that the return on investment of the selected firms will have a positive impact on their growth rate, with a 1% increase in return on investment resulting in a 9.42 percent rise in the growth ratio of the selected firms. The finding supports the hypothesis that firms with strong return on investment are more likely to involves in high environmental cost than firms with weak growth rate. In a similar line, the study agrees with Jensen (1986), who believes that firms should issue involve in adding value their environment where they operate their business irrespective of their cultural differences courtesy of corporate social responsibility in order to mitigate the consequences of agency problems. The findings of this study correspond with those of Abdi andAulakh, (2018), Abdi et al, (2020), Abiahu et al., (2018), Adegboyegun et al., (2020), who both said that a firm's short-term debt-paying capabilities has a statistically significant association with external cost.

The marginal effect coefficient (-0.5047) with p-value (0.017) at the 5% level of significance demonstrates that return on asset has a negative but statistically significant association with inflation and exchange rate as a result of language differences of the selected firms, as shown in table 4.4. The finding implies that a high level of return on investment will have a detrimental impact on the selected firms' inflation rate. This means that a 1% rise in inflation rate will result in a 50.47 percent reduction in the return on investment of the chosen companies.

The findings support the idea that having a higher proportion of inflation rates reduces the proportion of return on investment, short-term assets that can be used as collateral for short-term loans, lowering the borrowing capacity of companies whose primary source of debt is short-term bank loans. This will require such companies to be more culture sensitive and involves more in environmental spending. More specifically, the effect of total social cost, total economic cost growth rate and business risk (BR) on financial performance of the sampled multinational firms is positive (0.1171), (0.0159), (0.0824), (0.0016), and statistically significant (P-values of 0.041, 0.370, 0.237, and 0.387 at the 5% level of significance). While foreign exchange rate and inflation rate has negative (-0.1181 and-0.0942) and statistically significant (P-value 0.490 and 0.030 at the level of 5% level of significant)the findings of this study suggest that they are also critical factors to be considered when making decisions to optimize financial performance of the listed multinational firms studied.

## CONCLUSION

Several studies have been undertaken on environmental factors affecting financial performance in Nigeria. Most of these studies were conducted examining environmental factors and organization productivity attributes without combining other measures (such as business risk, growth rate, etc.) and also ignoring the important of financial performance as the nucleus of every organization across the world This is exactly

what this study attempted by investigating how cultural diversity and other environmental factors affect financial performance of multinational firms listed on NSE. A number of logical inferences were drawn based on the empirical evidence and findings of this investigation.

The study therefore, concluded that cultural diversity and other environmental factors have strong statistical relationship with the performance of selected companies listed on NSE. This viewpoint was established using inference statistics, which confirmed the existence of a significant effect with a p-value less than 5% threshold of significance. The study recommends that language differences, growth rate, environmental cost, exchange rate and inflation rate are important variables to consider when the management of sampled companies decides to examine the effect of cultural diversity and other environmental factor on performance of international companies in Nigeria.

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