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Exploring Multinational Company's Investment, Technological Development and Employment Creation in Nigeria

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Abstract

This study focused on multinational company MNCs activities as it affects Nigeria economic growth from 2015 to 2021. The explanatory variables include MNCs: technological development TDEV; employment creation EMLC; and investment INVT; while the dependent variable is real gross domestic products RGDP. The nature of the research design is ex-post-facto research that obtained secondary data from Central Bank of Nigeria Statistical Bulletin and National Bureau of Statistics covering the periods. Population of the study consists of the 30 MNCs listed as at 31st December, 2021. Sample size was 14 MNCs based on the judgmental sampling techniques. The analyses models adapted: Descriptive Statistics, Pearson Correlation, Variance Inflation Factor VIF and Multiple Regression. The models' results show that the MNCs activities predicted about 37% and 34% of R-squared and Adjust. R-squared found in RGDP in Nigeria; while the rest were explained by other factors outside the scope of the study. Finally, MNCs INVT is positive and statistically significant; while TDEV and EMLC are negative and statistically significant on RGDP in Nigeria within the study periods. The study recommends that the government should advice the MNCs to increase investment, employment and improve on TDEV in Nigeria. This study contributes to the existing body of knowledge with: the positive impact of the three variables applied; the modernized model of the study, the empirical findings and the rich literature for academia. Implications of the study result are that the findings were based on selected MNCs in Nigeria and care should be taken in generalizing the results in other countries.

Keywords: Multinational Company, Investment, Technological Development, Employment Creation, Gross Domestic Product, Economic Growth

Introduction

Multinational company MNC is any firm that has offices and functions in more than two or more countries worldwide. The management of multinational company offices and operations is mainly from the home country office. Conversely, multinational companies are those big conglomerates that found their way in search of firm growth in Africa especially in Nigeria after independence to take advantages of low markets, (Aworom, 2020). Today in Nigeria, there are still some of these MNCs that are still boasting their markets to better their home countries such as: United African Company (UAC), Toyota motors, Coca-Cola, Lever brothers, Mobil oil; Shell BP John Holt, etc. MNC can be: decentralized, global centralized, international company or transnational company. In history, one of the earliest MNC was traced to 'The mighty Dutch East India Company". The major dealing one of this first multinational was that it spread "porcelain, spices and exotica to Europe" with a link of its operations worldwide from the East and West, (Mondo & Visione, 2018). In those early days, there were other MNCs that had their ways, and they had powers to wage a kind of wars, negotiate treaties, coin money, and impose colonies, (Ames, 2018).

The history of MNCs in Nigeria dates back after the abolition of slave trade, (Aworom, 2013) [16]. Their presence and activities have assisted countries, especially Nigeria as a nation to struggle to develop and grow socio-economically over time, (Onudugo, 2017). However, their developments in African countries have been viewed to be bedeviled by its origins in policies of imperialism and Colonialism. Also, these companies have had some positive and even negative impact in the development of Nigeria economy before and after independence. One of the driving forces of MNCs has been to take advantage of low-cost labor, greater market and raw materials in underdeveloped countries. Ever since MNCs came, they have dominated the Nigerian economy before, and after her independence and have as well grown their operations significantly over time and yet, evidences show that they have left the host countries of Africa to still struggles for better life and socio-economic development (Onudugo, 2017). In Nigeria specifically, especially in oil drillings; these companies have so much amassed wealth from oil to develop their countries of origin, but have left the oil drilling areas devastated with spilled oils that have damaged the farm environments and consequently left the indigenous people in perpetual poverty. Some of these firms, have perpetrate heinous activities such as: divide and rule policies, violation of human rights, pollution of the environment, inadequate technology transfer, poor discharge of adequate corporate social responsibilities; and sea environmental degradation: without paying compensation adequately to the indigenous (Edem, 2018; Bulu & Ango, 2018). Yet up-to-date, no attempt is being made to remedy these appalling situations that have impoverished millions of lives in oil drilling areas in Nigeria.

The fact still remains, that some available literatures, have pointed several accusing fingers on these MNCs activities negative effects on several occasions, indicating that they have been playing active roles in the under development of Nigeria: such as distinguished on the basis of their orientation into "ethnocentric" (home-country oriented), (Bernadine, 2018); exploitative of natural resources found in developing countries such as Nigeria, which are meant for its developmental goals, but are not productively utilized due to de-capitalization of the economy in form of profit repatriation, (Osuagwu & Onyebuchi, 2017). However, the concept of MNC has increased “globalization” as a means of corporations finding more ways in other countries rather than their origin. Thus ‘globalization is an integration of the world economies into one “global village, (Onudugo, 2017). Also, Ozoigbo and Chukuezi, (2016) indicated that investing in foreign land is not to better the lot of the host nation, but to exploit as much as possible in order to develop the home country. Some literatures have argued that it is not inherent in the MNCs to solve social or economic problems; some argue that it is the interaction between MNCs and host country institutions that causes the problems, (Wiig & Kolstad, 2020). But, there is an undeniable fact that MNCs have made some impact in the world economies through products availability, development of new technology, spreading of skills, physical and human resources developments, investments, creation of employments worldwide. Odigwe (2019) argues that their activities have made positive and outstanding contributions in the form of technology transfer, increased investment, and higher income levels of the host communities to mention a few. On the other hand, the United Nations General Assembly in 1970 encouraged foreign direct investment, because of the tremendous positive impact which MNCs created in some economies of Europe. It is from these foregoing arguments that this study is anchored to: critically check and properly examine if there have been any positive impacts of MNCs activities on Nigeria economic growth; and to further examine what would be the research outcome, the contributions of the research to the body of existing knowledge, the recommendations and finally, the results implications to the future users.

Objectives of the Study

The main objective of this study is to determine the effects of multinational companies MNCs on the Nigeria Economy. The specific objectives are:

To critically examine MNCs investment; technological development and employment creation impact on Nigeria economy.

Research Questions

The research questions that guide this research work are as follows:

To what extent do MNCs investment; technological development and employment creation impact on Nigeria economy?

Hypotheses of the Study

The following hypotheses have been posited to guide this study:

Multinational company investment; technological development and employment creation do not impact on Nigeria economy.

Review of Related Literature

Conceptual Framework

Multinational Company

Andabai, (2020) states that, “Multinational Company” MNC can be seen as companies that own and manage business in more than one country. MNC included the parent company that has head office at the home country with subsidiaries, associates, that operates in other countries. Andreff, (2018) agrees that the “operations of MNC outside the company's home country” might be associated with the “parent by merger’, “operated as subsidiaries” and have some reasonable sovereignty in its functions. Some characteristics of parent company is that it has the greater percentage of the company’s share capital to have reasonable control; however headquarter activities are extended to its subsidiary (domestic) functions; while the main office remains the decision-making center Wilczynski, (2016). In their opinions, Rugman and Collinson (2019) expressed the difference that exist “between Domestic Company and the MNC” and further explained that “the former operates strictly within the geographical confines of a country; while the later operates across country boundaries”. At the same vein, the United Nations UN ideas about MNC agree with (Rugman & Collinson, 2019) that their activities extend beyond one country. The explanations of Rugman and Collison, (2019) and UN depict some minimum qualifying characteristics that define MNC, in the form of the kind of activity, importance, the level of foreign component and also the percentage of the total activity exerted by MNCs in various countries. These can be evident in the total assets bases, sales, production, employment, or profits of foreign branches and affiliates

(UNCTAD, 2020). MNC was explained by Jones as company that has and control her operations across other countries, (Jones, 2016). The evidences have always been that the MNCs productions of goods and services, distributions have been taking places across boundaries; in a global base or throughout the world. Many researchers' definitions of MNC have maintained that they are businesses that cuts across national borders: to Omotola, (2016), it is a conglomerate with its headquarters in a developed country and one or more that operates in other nations; Spero and Hart (2019), shows that MNCs maintain direct investments overseas and has value-added controls in more than one nation; Dunning (2018) says they engage in foreign direct investment and controls value added holdings in other countries; Hennart (2018) sees it as a privately owned institution that cuts across countries; but Kogut and Zander (2018) views it as economic organizations that has grown from the county origins to other boundaries; Hill (2015) opines that it has productive activities in two or more countries. MNCs have been argued by some authors to be a force that battles the challenges of underdevelopment and propels development, contribute immensely to the growth and development of many countries; while others argue on the negative and destructive influences that result in the high price of technology, lowering the invoices of exports, and other devastating practices etc. (Akerodolo, 2020; Ikelegbe, 2015; Ogbgbo, 2015). MNCs have some features, characteristics and objectives such as "very large corporate; they always base their operations from home nations, carries out and conducts business in other nations, but control the whole business affairs from the host nations.

Technological Development TD

The expectations have been that MNCs should aim to engineer economic activities in under-developing nations such as: working towards improving the qualities of life and economic growth in regional and global commons (Litvin, 2017). Because of this, Osugwa and Onyebuchi (2018) indicated that the main focus of MNCs should be to reduce cost of production of goods in the world markets. This could only be achieved through technological development. Technology or technological development in some concept includes any different form of techniques, useful skills, any mechanism developed or invention of information and communications technology (ICT) that gave way to the production of a new goods or products; that which brought about a new process or method in the form of innovation that ushered in a better and faster way of producing goods and services at a lower cost using factors of productions. Hodrab, (2016) is of the views that "technological developments TD in an economic growth resulting from the fast growth of these technologies and their market in the nineties". Some people have asserted that it assist to retain long period growth as an evidence of a manufacturing technology which passes a laid down system of technological development, (Alani, 2018). TD aims to improve individuals, human capital, both private and government sectors to convert information into knowledge as driving force to necessitate permanent change in any county's economic development and the society at large (Kim, 2013; Lyon, 2013). The function of TD in growth of economy was stated by (Hodrab, 2016) as a "critical place in economic research" according to him this has "become an active area for investment". Evidences have shown that both private and public-sector have invested in TD to facilitate performance and receive the advantages accruing from TD such as information and jobs creations for their citizens, (IDC, 2018). Several amounts of dollars have been spent in continents of the world on Information and Communication Technology Research and Development (R&D) (Statista, 2018). The huge amounts of money that are being spent by both private and public sectors are a reflection of how TD contributes in any Nation's economic growth, in the form of job creations and opportunities in other services. Nigeria as a developing nation has not been left out spending billions of dollars yearly in importation in other to achieve TD in her products and services (Vanguard, 2016). In the year 2022, the National Bureau of Statistics asserted that the Gross Domestic Product (GDP) reported that the information and communications technology (ICT) sector contributed about 18.44% to Nigeria's GDP within that year's second quarter. Uwaifo and Uddin (2009) found out that Nigeria in its development is still grossly low in terms of its technological productivity. Kasongo., Sithole and Buchana (2023) discovered that both technological and non-technological innovations are positive on labour productivity, but more on non-technological innovation in Ghana. Kalko and Erena (2023) stated that technology transfer and technology acquisition are positive and significant on "process innovation, product innovation, and method innovation". Olusegun., Akinsanmi, and Fasasi (2019), maintained that the effectiveness of TD in Africa will mean "establishing effective institutional framework and linkages so that the various science and technology institutions" and possibly be a link up with some of these multinationals within the geographical locations. However, available literatures have shown it is not so, (Onudugo, 2017; Osuagwu & Onyebuchi, 2017; Ozoigbo and Chukuezi, 2016).

Multinational Investment

Multinational investment is that direct investment equity flows in the reporting economy. It is regarded as the totality of equity capital, reinvestment of earnings, and other capital cross-border investment. In Nigeria CBN Quarterly, reports Sep 2022, shows that Foreign Direct Investment (FDI) increased by 725.7 USD million in Sep 2022, which dropped 1.5 USD billion as compared to the last quarter. Many literatures have argued on MNC FDI and reinvestment as it affects Nigeria economic growth. Some of these studies have argued that it has positive contributions such as (Adegbite, & Ayadi, 2011; Koojaroenprasit, 2012; Onu, 2012; Adeleke., Olowe, & Fasesin, 2014; John, 2016; Ali, & Hussain, 2017). There are other studies like (Okechukwu., Vita & Luo, 2018; Wang and Blomström, 1992; Kokko, 1994; Solomona and Klytonb, 2020), who agreed that it boasts growth in the form of capital increase in the host nation. In other words, MNCs' domestic investments assist the transfer of spillover technology to local firms such as the transfer: of workers and technology from foreign to domestic firms and also increase in exported goods and increase of competition, (Solomona and Klytonb, 2020). While literatures have supported little or no contributions to the growth of Nigeria economy; some others are of the view that MNC investment only contributes small and it is not significant in economic growth (Akinlo, 2004; Louzi, & Abadi, 2011). FDI and growth in cross country was investigated by (Alfaro, 2003) and the result indicates that the total investment has an unclear effect on growth; Akinlo, (2004) reported that MNCs investment in Nigeria from 1970-2001, has a little effect on the economic growth; Noormamode, (2008) examined the MNCs investment and growth in 58 countries and found no definite evidence on the growth. In Jordan, Louzi, and Abadi, (2011), discovered that FDI inflows has non-significant effect on economic development; contrarily, Koojaroenprasit, (2012) in South Korea discovered that it has a strong and positive impact; Onu, (2012) agreed that it is positive; Abbes, Guelli., Seghir and Zakarya, (2014) used 65 countries and found "unidirectional causality" to total local products as an evidence that it does not cause growth. At the same time in Nigeria, Adeleke, Olowe and Fasesin, (2014) and John, (2016) showed that FDI ie. "in-flows are positive and statistically significant" on Nigeria economic growth; Ali, and Hussain, (2017) proved that MNCs investment from Pakistan has a positive impact on the economic growth. More-so, Obayori and Chidinma (2018) found that foreign and domestic investment was both positive and significant in growth; while Omoniyi, (2019) said they were positively and significantly related; while inflow is significant only. Osuagwu and Ezie (2018) argue that despite the negative effects of MNCs, they still contribute positively in employment generation and technological development in Nigeria.

Multinational Employment Creation

Creation of employment has been one of the major contributions that are being expected from the operations of the MNCs in Africa, especially in Nigeria. Any other results that are devoid of this view, is a demonstration of other opinions, who claim that MNCs exists only to take advantages of the under-developed nations, purposely to harness and repatriate their incomes to make better their home based countries, (Ozoigbo & Chukuezi, 2016; Osuagwu & Onyebuchi, 2017). Odogbor (2014) indicated that about 40% Nigeria's working population belong to the public and private sector of which the multinational corporations belongs to the private sector, indicating that they have a significant role in creation of employment. The MNCs as a private sector are considered to pay relatively higher than the domestic sector (Mbanefor, 2013) and according to Odogbor, 2014, if Nigerians are given opportunity to make a choice of employment, most would prefer private than public sector. Edem (2014) agrees that MNCs creates "large employment opportunities". Kodjo, (2019) stated that MNCs have indeed offered a "substantial employment" to many in Nigeria and as such has reduced Nigeria unemployment problems, (Ake, 2018). Neil (2014), also insists that MNCs have "contributed immensely" through profit earned in employment creation and royalties, taxes paid to the government (Awobajo, 2021). Ikelegbe (2015) and Onuoha (2015) argue that apart from employment creation, MNCs make huge capitals available in production in many sectors of the economy. To them, these activities contributed to increased output in the economy, and also create job opportunities, (Enwereuzor, 2018). MNCs have significantly contributed to the nation's economic growth (Andabai, 2016). Another argument by Nwankwo (2020) posited that MNCs technological transfer to developing nations, advance less developing nations and as well increase their productivity to hasten quick economic growth. However, some opinions have criticized MNCs in several issues such as Eleazu (2015) who points that they have almost eradicated skills by their so training of private sector managers as we have these days; and Olukoshi (2014), explained how they are "streamlined, with contractual activities", instead of a more "scientific and technological revolution and sophisticated production". Ikelegbe (2015) and Kehinde (2017) still stress that these companies still contribute to the economy. Conversely, Ajala (2015) argue that in other to reduce employment, they politicize the polity by applying "more capital per employer" and by this technique, they are "unable to employ a large number in which there exists abundant labour" of employees in their non-countries origins. Also, Onimode (2019), argues that MNCs are "contributing to unemployment crises in Africa" and another opinion by Alapiki, (2016) supported this above assertions that there are "four unemployment problems created" by the MNCs and these are "initial proliferation of labour, oppressive taxes, and alienation in appropriate capital intensive technology and the impact of labour into Africa through the expatriate quota". On this issue, Marta (2021) explained that domestic and MNCs may naturally re-enforce each other in the early stage, but latter MNCs "become competitive, antagonists and… more expensive" (Agbu, 2015); also, MNCs has been argued as "harassing, competitive and eventually eliminate local infant firms, reducing national economy" in the host countries, Ogbogbo (2015); and ultimately affect on indigenous companies groth, Adebisi (2015).

Economic Growth

The establishment of MNCs and their activities will be baseless without making contributions to the development of Nigeria economy, (Andabai, 2020). Thus, the operations of MNCs in various counties should assist to curb low level of investments and lack of managerial skills in developing countries, (Odogbor, 2016). The primary function of MNCs is to instigate development and inward flow of resources, (Edem, 2016), instead of repatriation syndrome. Akerodolo (2020) pointed that the oil operations and the "huge levels of investments (usually in billions of dollars) is mainly one of the largest and most important industries" established by MNCs. Ibeanu (2021) stated that the MNCs economic contributions are observed from many facets such as: "total employment, assets sales or profit derived from foreign"; income quarter of the "subsidiaries of foreign" owned MNCs producing firms that add to the domestic output or "capital formation" or the impact of the operation of locally controlled MNCs whose incomes bring about balances of payment. As far as Nigeria economy is concerned, according to Odogbor (2016), MNCs contributes about thirty percent of the work population among the private and public sector. Hence, the substantial employment benefit provided to the indigenous citizens by MNCs have added much to the economy and thus have made the country to benefit much, (Ake, 2018; Omotola , 2016). Also, Ikelegbe (2015), pointed clearly that the capital inflow "of the activities" of MNCs resulted to an enormous "multiplier effect"; and enhanced income within Nigeria economy, (Michael, 2018). Thus, with such enormous contribution, it is practically undeniable facts, the effect through its gas and oil exploration in the growth of the Nigerian economy, (Andabai, 2016). Conversely, some schools of thoughts still point the degeneration effect of MNCs activities in the economy. For instance Kodjo, (2020) argues that they have consistently utilized such "capital intensive" based technologies that have been pointlessly incompatible "with the Factor Endowment" of the developing economies of nations; while other schools of thoughts like, Andabai (2016) insist that, their promotion of country "development" levels showcase "more an evidence of failures" instead of economy growth. Awobajo (2016) further agrees to these, when he emphasized that Oil and Gas explorations "has done more harm than good" within the Niger Delta in Nigeria and thus, have caused according to Nwosu (2018), "economic and social degradation' within the situated communities areas in Nigeria, than economy improvement and thereby majority consider them as "agents of degradation and economic woes" such as evidenced in their dealings as observed by Kodjo (2020), that their activities show that they "are neither human Italian nor altruistic". Further, Sherlock (2017) insisted that they are "egoistic and egocentric" to the detriment of the host economy. Eluka, Ndubuisi-Okolo and Anekwe (2016) 's research in Nigeria found that MNCs have done more harm than good; because they repatriate every profit, degrade environment, violate human rights, end up not making any technology transfer to the host indigenous and finally, perpetrate bribery and corruption to have their way which ultimately harm the economy. Ozoigbo and Chukuezi (2011) found that MNCs operation includes some negative tendencies, but still contribute positively. In the same vein Udensi, (2011); Abanyam, Aduke and Edwe, (2020) argue that despite the negative effect of MNCs, they contribute positively to the economy. However, Qamar and Abdullahi (2021) found categorically that MNCs in oil and agricultural in Nigeria are not significant in Nigeria economy growth. In like manner, De Mello (2017) made a survey to ascertain whether direct investment stipulates growth in developing countries and discovered that it is more in "theory than in practice". More-so, Todaro, (2017) asserts that there exist much gap between the domestically available supplies and planned resources to achieve growth targets by MNCs.

Theoretical Framework

In economic growth, the endogenous theory is predominantly the theoretical framework in some researches that have effected foreign direct investment on growth as stated in (Borensztein, 2018; Martin & Ottaviano 2019). But, this study comprises more variables than only direct investment. The new trade theory propounded by Tejvannne (2013) will be more relevant in this study. This theory gives more emphasis of the dynamics of growth of global world with MNCs that serve as the main driving force of the economic growth. The theory further supports that government must create an enabling environment for new and existing firms if they want them to build and sustain economies of scale and beat competitor at long run. The theory advocates as it pertains to international transactions that "network effects can occur in key industries and they are the "very substantial economies of scale that organizations use to build" and these are significant to supersede the traditional theory of comparative advantage. Thus, this research employing more variables determines to relate how the finding correlates with this theory.

Empirical Studies

Uwaifo and Uddin (2009) found the impact of MNCs innovation on productivity in South Africa firms. They discovered that "firm size, public financial support, patent protection and market sources of information are positive on innovation and also that both technological and non-technological innovations are positive on labour productivity. Atoko, Sithole andYasser (2023) examined MNCs innovation and productivity in SA services firms. They reported that technology transfer and technology acquisition are significant and positive on process innovation, product innovation, and method innovation. Adedokun., Fatima, and Abiodun (2019) found that Africa should embrace science and technology as important means of quickening socio-economic development and enhance international competitiveness and secure position in the world economy. Ewubare and Udofia, (2018) discussed MNC impact on economic growth in Nigeria and found that they are significant on economic growth, while MNCs in service sector is non-significant. Shameema and Sahidur (2019) investigated the impact of MNCs on developing countries and found it positive and insignificant on economies and they further found it significant in association with exports and economic growth. Tonye and Andabai (2019) after examining the impact of MNCs on economic growth in Nigeria; revealed that economic growth and MNCs have a long-run equilibrium relationship. Osuagwu and Ezie (2013) discovered that MNCs in relation with the Nigerian economy serve as an agent of imperialism, exploitative of natural resources making it in effective because of profit deportation, even though their activities have positive contribution on TD and creation of employment. Eluka, Ndubusi and Anekwe (2016) stated that MNCs in relationship with the Nigerian growth have not done well to the economy, because they repatriate every profit they earn. On the same issue, Udensi (2015) stated that MNCs serve as agents of imperialism, even though they make positive contributions in technology development and employment creation. Ugur (2020) reviewed institutions, economic performance and theory evidence. The review shows that MNCs have made both theoretical and empirical contributions to economics research and inspired policy debate which is lopsided on developing countries. Fuad (2021) studied economic growth in relation with unemployment in Jordan. The results suggest that there is a lack of economic growth, but is not accountable to the unemployment problem in Jordan. Ogiriki and Werigbelehga (2015) investigated MNCs and economic growth in Nigeria. The finding show that the study variables do not have unit roots and with a causal relationship between MNCs and economic growth. Odunlami and Awolusi (2015), found that MNCs and economic development in Nigeria have made some contributions, but conversely, they are yet to transfer technology and further they still carry on unethical business that destroys their image in Nigeria. Anwar and Muhammad (2018) analysed economic and performance of MNCs in Asian economies and the results were that e-government plays a positive and significant impact on Asian economies even with the effects of "trade, government consumption and inflation". Nwonu, Onodugo, Agbaeze and Nwoba (2019) determined the impact of MNCs Oil on economic growth in Nigeria from 1960 to 2010. The study found that MNCs oil companies' contribution is positive and significant on economic growth. Hnguyen, (2020) applied OLS to analyze "investment, export and import on economic growth" in Vietnam. One of the major finding was that investment is "positive and statistically significant" on Vietnam's economic growth.

Methodology

Research Design

The nature of the research design is ex-post-facto research, which uses data that are already in existence and at such cannot be manipulate. The study focused on multinational company activities as it affects Nigeria economy from 2015 to 2021 (7 years) period. The study independent variable is MNCs activities which include: technological development TDEV; employment creation EMLC; investment INVT; while the dependent variable is real gross domestic RGDP.

Sources of Data

The study used secondary data collected from the multinational companies from 2015 to 2021. The Secondary data was sourced from Central Bank of Nigeria CBN Statistical Bulletin and the National Bureau of Statistics data.

Population of the Study

The population of the study consists of the 30 MNCs listed and quoted in Nigerian exchange limited as at 31st December 2021.

Sample Size and Sample Techniques

The sample size was based on the judgmental sampling techniques and that selected (14) MNCs listed on the floor of the Nigeria exchange group.

Variable Definitions

The dependent variable, ECG = Economic growth applied as in (Njimanted, Ngong & Nembo, 2016) and is proxy with Real gross domestic products RGDP. This is, (GDP 2 - GDP 1) / GDP 1 in percentage, can also be measured as in increase of peoples' real income and as the ratio between income and prices of purchasing power increase.

The independent variables are

Technological Development = TDEV as in Asmau (2021).
Investment = INV as in Solomona and Klytonb, (2020); Nguyen, (2020)
Employment Creation = EMLC as in Anyanwu, (2013); Meyer, (2017)

Model Specification

The regression equation is employed to estimate the effect of Multinational companies' impact on economic growth RGDP; we adapt two models by:
Njimanted., Ngong and Nembo, (2016) and Nguyen, (2020) to modify:

$$GDP = \beta 1 + \beta 2\ FDI + \beta 3\ EXP + \beta 4\ IMP + u \ldots\ldots\ldots \quad (1)$$

$$\ln RGDPt = \alpha 0 + \alpha_1 \ln FDIt + \alpha_2 \ln GFKFt + \alpha_3 \ln GEt + \alpha_4 \ln HKt + \alpha_5 INFLAt + \mu\ 1\ldots\ldots \quad (2)$$

Model modified as:

$$lgRGDP_{it} = \beta\alpha 0 + \beta\alpha_1 lgINVT_{it} + \beta\alpha_2 lgTDEV_{it} + \beta\alpha_3 lgEMLC_{it} + \mu_{it}\ldots\ldots \quad (3)$$

Where we define the working variables as follows

Where $\alpha 0 \neq 0$, $\alpha_1, \alpha_2, \alpha_3 > 0$; the a priori $\alpha 0, \alpha_1, \alpha_2, \alpha_3$, and $\beta 0, \beta_1, \beta_2, \beta_3$, as the parameters of the models to be estimated. These show the model signs and sizes or the model directions and magnitudes of the estimated coefficients.
$IgRGDP_{it}$ = Real gross domestic product; where the lg = the log which is the logging line that raises the model for easy interpretation of the coefficient of study variables. This is in the form of elasticity that can be either in percentages or negative values in some years; β_o = Constant term (intercept) of the study model; β_1- β_3 = Explanatory variables coefficients of economic growth; $\mu_t - \mu_t$ = Stochastic Elements that represent all other variables affecting Nigeria economic growth and multinational companies which were not captured in our models;
$INVT_{it}$ = Investment, i in period t; $TDEV_{it}$ = Technological development, i in period t; $EMLC_{it}$ = Employment creation, i in period t; while t = 7 years from (2015-2021).

Analyses Techniques

The analyses techniques adapted, Descriptive Statistics, Pearson Correlation, Variance Inflation Factor VIF and Regression model.

Data Presentation, Analysis, Interpretation, Discussions and Summary of Findings

Descriptive Statistics Analysis

Table 1: Descriptive Statistics Tables

	RGDP	INVT	TDEV	EMLC
Mean	2.87790	58.5621	0.23233	0.48373
Median	1.28000	62.5411	0.10000	0.70000
Maximum	6.96100	90.0000	1.10000	1.00000
Minimum	2.52000	0.10000	0.10000	0.10000
Std. Dev.	1.77001	18.1428	0.43335	0.32775
Skewness	0.29376	-0.71945	1.25657	-0.51330
Kurtosis	3.52153	3.70006	2.7176	1.81868
Jarque Bera	2.56765	11.1767	28.2534	10.1313
Probability	0.26512	0.00371	0.00001	0.00777
Observations	98	98	98	98

INVT= Investment; TDEV= Technology Development; EMLC= Employment Creation; RGDP= Real Gross Domestic Products
Source: Author's computation, (2023)

The descriptive statistics shows the standard deviation, mean, maximum and minimum values of the study variables. The RGDP shows MNCs' investment has a maximum value of 6.961 and a minimum value of 2.25200 and a corresponding mean of 2.8779 with a Standard deviation Std. of 1.777. These show there are very large differences between the maximum and minimum values of the indicators of RGDP by the selected firms within the reviewed period. The extreme large value seems to picture that some firms performed well, while others did poorly. RGDP shows the ability of multinational corporations to generate profit from assets and reflect how well their real investments resources generate profits in Nigeria.
The INVTs has a maximum of 90.000; and minimum of 0.10000, with mean of 58.562 and, Std. of 18.142. TDEV has a maximum of 1.1000 and a minimum of 0.1000, with a mean value of 0.2323 and Std. of 0.433. EMLC has a maximum of 1.1000 and a minimum of 0.1000 with a mean of 0.483 and a standard deviation of 0.3277. The average sampled firm has each of variables of (INVT, TDEV and EMLC) scores as measured using the index differences between the maximum and minimum values indicates how MNCs differ greatly over the period under review.
The Jarque-Bera (JB) probability value shows that all study variables to be normally distributed and the RGDP. There no evidence of any variables having outlier that is likely to distort the conclusion from the model not to be reliable for

drawing generalization. This justifies the use of panel least square estimation techniques.

Skewness measures show these values: 0.29376, -0.71945, 1.25657, -0.51330 for GDP, INVT, TDEV and EMLC respectively. These values show that the distribution has a right long tailed distribution, which is "Skewed" for all the variables except, INVT and EMLC. Also, the Kurtosis measures of RGDP, INVT show that their Kurtosis, K is greater than three. It can be defined as tail with fat distribution, and shows it is peak in appearance than a normal statistical distribution. TDEV and EMLC show that their Kurtosis, K is less than the value of three (3), which is the standard measures in statistical distribution.

Pearson Correlation
Correlation Analysis Table

Table 2

	RGDP	TDEV	EMLC	INVT
RGDP	1.000000			
TDEV	-0.190543	1.000000		
EMLC	-0.111407	0.311286	1.000000	
INVT	0.495456	0.118407	0.400931	1.000000

INVT= Investment; TDEV= Technology Development; EMLC= Employment Creation; RGDP= Real Gross Domestic Products
Source: Researcher's computation, (2023)

Pearson Correlation results show that there is a negative and weak relationship among the variables of MNCs effect in RGDP in Nigeria. Specifically, there is a negative correlation among: TDEV, EMLC and RGDP with exception of INVT which indicates a strong association, and positive relationship with RGDP. Checking for Multicollinearity shows that there are no two variables that are perfectly correlated to have an outlier. With the assertion the study still employs the check for variance inflation factor (VIF).

Test for Variance Inflation Factor VIF in the Model
VIF Table

Table 3

Variable	Variance	VIF	VIF
INVT	0.227758	1.452565	1.117356
TEDV	0.464812	4.281646	1.310952
EMLC	0.000339	14.21535	1.291598
Mean			1.239968

INVT= Investment; TDEV= Technology Development; EMLC= Employment Creation; RGDP= Real Gross Domestic Products
Source: Author's Computation, (2023)

The result of the VIF above is to determine if there is any Multicollinearity among the explanatory variables applied for the study that could present bias in the interpretation of our model. The rule of thumbs in statistical tests is that the mean values of the independent variables coefficient should range between (0) to less than (10). This means that there are no variables with outlier or, that are highly correlated from the table figures above.

Panel Regression
Regression Table

Table 4

Study Variables	Coefficient	Std. Error	t-Statistic	Prob.
C	2.685367	0.667422	4.176344	0.0000
INVT	0.103048	0.021336	0.916148	0.0441
TDEV	-0.772429	0.477654	-1.642112	0.1037
EMLC	-0.580700	0.011335	-0.863854	0.0052
R-squared	0.370034	Mean dependent var		2.787681
Adjust. R-squared	0.336556	S.D. dependent var		1.770216
S.E. of regression	1.754735	Akaike info criterion		4.222704
Sum squared resid	330.0059	Schwarz criterion		4.236447
Log likelihood	-200.0637	Hannan-Quinn criter.		4.154226
F-statistic	4.370535	Durbin-Watson stat		1.847905
Prob(F-statistic)	0.001267			

5% significance and 10% significance benchmarks
INVT= Investment; TDEV= Technology Development; EMLC= Employment Creation; RGDP= Real Gross Domestic Products
Source: Authors' Computation, (2023)

The explanation of the regression model starts with the Durbin-Watson (DW) which checks for the appropriateness of the model applied for the analysis. This shows to have the value less than two, as an indication that it has non auto-correlation and thus it is appropriate. The model F-statistics measures the overall significant and the model has the value of 4.37053. Also, the model Probability F-statistics has a value of 0.001267 which seems to be less than the normal decision value of 5% level of significance. Since the value is less than the significance value we accept that the MNCs activities are generally significant in Nigeria economy.

The value of R- squared coefficient of determination stood at 37%, which implies that 37% of the systematic variations in the dependent variable RGDP was able to be predicted by the individual variables power of the independent variables; while about 63% were unexplained and possibly these were explained by the stochastic error term. On the other hand, the adjusted R-squared value is 34%, which shows that all the independent variables jointly has the power to explain about 34% of the system variation in the change in RGDP of Nigeria for the period; while the balance of 66%, are the stochastic elements that represent all other variables affecting Nigeria economic growth and MNCs which were not in the model.

Test of Hypotheses of the study
Multinational companies': investment INVT; technological development TDEV and employment creation EMLC do not impact on Nigeria RGDP.

Investment INVT as one of the independent variables activities of MNCs in Nigeria has the coefficient value from the model as 0.103048, with a corresponding probability value of 0.0441, is said to be positive and statistically significant on RGDP. By this the study rejected the null hypothesis of the study and concludes that investment has positive and significant impact on RGDP.

TDEV is one of the independent variables activities of MNCs in Nigeria and this has the coefficient value of -0.772429 from the model, with corresponding probability value of 0.1037, it is said to be negative and statistically significant on RGDP. By this, the study rejected the null hypothesis of the study and concludes that TDEV has negative and significant impact on RGDP.

EMLC is one of the independent variables activities of MNCs in Nigeria economy and this has the coefficient value of -0.580700 from the model, with corresponding probability value of 0.0052, is said to be negative and statistically significant on RGDP. By this, the study rejected the null hypothesis of the study and concludes that EMLC has negative and significant impact on RGDP in Nigeria

Findings of the Study

The findings of this study show the followings:

The MNCs investment has positive and significant impact on RGDP.

The MNCs TDEV has negative and significant impact on RGDP and finally,

The MNCs EMLC has negative and significant impact on RGDP in Nigeria.

Discussion of the Findings

The findings of this study show that MNCs activities are generally significant on the real gross domestic products in Nigeria. This result is supported by these prior studies that have argued positive contribution: (Onu, 2012; Adeleke., Olowe, & Fasesin, 2014; John, 2016; Ali, & Hussain, 2017). It also aligns with the arguments of: (Okechukwu., Vita & Luo, 2018; Wang & Blomström, 1992; Kokko, 1994; Solomona and Klytonb, 2020) who earlier posited that MNCs activities boast host nation's economy. Other prior researchers who found positive are: (Osuagwu & Onyebuchi, 2017; Akinlo, 2004; Louizi & Abadi, 2011; Noormamadi, 2008; Abanyam et al., 2020; Shameema & Sahindar, 2019; Tonye & Andebai, 2019; Eluke et al., 2016; Hnguyen, 2020); while Qamar & Addulahi, 2021 and De Mello, 2017), found negative result in disagreement with this result.

Further findings: show that investment INVT as one of the variables of MNCs activities is positive and significant on RGDP. This is supported by these prior research works: (Akinlo, 2004; Adegbite, & Ayadi, 2011; Koojaroenprasit, 2012), while it did not agree with the findings of: (Ogiriki & Werigbeleliga, 2015). Technology development TDEV, as an independent variable of MNCs activity is in Nigeria is negative and significant on RGDP in Nigeria and these agree with these prior results: (Kosongo, et al., 2023; Kalko & Erena, 2023; Loize & Abadi, 2011; Koojaroenprosit, 2012; Ali & Hussain, 2017; Obayori & Chidinma, 2018; Ononiyi, 2019; Osuagwu & Ezie, 2018; Uwaifo & Uddin, 2009; Atoka, et al., 2023; Adedokun et al.,2019); while it disagrees with these prior findings, (Abbas et al., 2014 and Ugur, 2020). Employment creation EMLC, as one of the independent variables of MNCs activity seems to be negative and significant on RGDP in Nigeria as found in this study. This agrees with the following prior authors' findings: (Ake, 2018; Awobajo, 2021; Ikelegbe, 2015; Onuoha, 2015; Enwereuzor, 2018; Andebai, 2016; Nwankwo, 2020; Keyinde, 2017; Osuagwu & Ezie, 2013 and Udensi, 2013); while the result disagrees with these prior research works' findings; Ajala, 2015; Onimode, 2019; Agbu, 2015 and Adebisi, 2015).

Summary of Findings

The findings of this study are summarized as follows:

The value of R- squared stood at 37%, which indicates that the systematic variations in the dependent variable RGDP were predicted by the individual variables power of the independent variables; while the rest were unexplained. The adjusted R-squared is 34% of the independent variables, which jointly explained the systematic variations of these change (34%) found in RGDP in Nigeria economy. Finally, other specific findings show that MNCs activities of: investment is positive and statistically significant; while .TDEV and EMLC are negative and statistically significant on RGDP of Nigeria within the selected periods.

Conclusions

This study shows that the three independent variables of MNCs activities in this study predicted about 37% and 34% of the value found in real domestic products in Nigeria; while the rest were attributable to other factors outside the scope of this study. Finally, MNCs activities of: investment is positive and statistically significant; while TDEV and EMLC are negative and statistically significant in RGDP of Nigeria economy.

Recommendations

The study recommends that government should find means to ensure that MNCs make more: investment, employing creation and improve in technology development in Nigeria.

Contributions to Knowledge

This study contributes with the modernised model applied in this study and the enormous empirical literature for academia.

Suggestion for Further Study

Suggestion for further study should embrace other activities of multinational companies in Nigeria and other African nations.

Implication of the Study

The main implication of the study result is that the findings were based on selected multinational companies activities in Nigeria and care should be taken in generalizing the results in other African countries.

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