Exchange Rate Fluctuation and Sectorial Output in Nigeria

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ABSTRACT
This paper examined the relationship between exchange rate fluctuation and sectorial output in Nigeria, the study made use of exchange rate as endogenous variable while agricultural sector contribution to gross domestic product, industrial sector contribution to gross domestic product, construction sector contribution to gross domestic product, trade sector contribution to gross domestic product and service sector contribution to gross domestic product was use as exogenous variable in the study. Time series data was gotten from Central Bank of Nigeria Statistical Bulleting between the period 1985-2020, the study made use of Descriptive Statistics, Short-run Static Multiple Regression, Phillips-Perron Unit Root Test, Johansen Cointegration, Error Correction Estimates and Granger Causality Tests. The error correction estimates result showed that the five sectors have a positive and significant relationship with exchange rate. The study therefore recommends that the Nigerian government should explores the increased competitiveness of the sector in its economic diversification efforts by sourcing of raw materials locally so that the positive spill-over effects of sourcing for this product will be reduced. In other words, the agricultural sector could provide an avenue to expand the revenue base of the government.
Keywords: Currency, Economy, Exchange Rate, Sector, Fluctuation.

INTRODUCTION
An essential macro-economic variable that is essential in the formation of policy is exchange rate, the stability of this rate helps in achieving macroeconomic goals and objective speedily, a few of this objective includes price stability, full employment, uniformity in income distribution and economic growth, according to Jhingan, (2004) an increase in national income is implied to be economic growth, exchange rate plays a significant impact in economic stability, competitiveness and international trade via the relative price of home and foreign commodity and asset. Because of difference in various endowment, exchange rate plays a vital role in foreign trade (Enekwe, Ordu, & Nwoha, (2013), according to Asinya and Takon, (2014) the economic metier and competitiveness is reflected and measured by the value of the countries exchange rate, this therefore makes its efficient management enhance economic performance, Asher (1984) stated that this rate is one of the yard stick that helps to determines economic growth in developing country. Fluctuation in exchange rate have universal effects, with its consequences a few are reduction or an increase in the prices of commodity, in level of production, in interest rate and wages. The collapse of the Bretton Woods System witnessed the era of ceaseless and ever-increasing fluxes in exchange rates value as a result of this in the early 1970's an increase is noticeable from the period where by countries practiced fixed to flexible exchange rate system, after which the high volatility eruption posed a major obstacle for effective implementation of macroeconomic policy, forecasting exchange rate between countries is a very a tough task. Mundell's (1961) and McKinnon (1963) postulated that the size and openness of a

country is a fundamental determinant that affects the choice of exchange regime, they discovered that fixed exchange rate regime is basically adopted by small open economy while closed economy adopts flexible exchange rate system. Mohanty and Klau (2005) attest that superior importance can be identified whenever the pass through of the exchange rate is high which has a significant effect in the real and financial sector of the economy, Markiewicz (2006) discovered that the geographical concentration and economic size of which a country is located determines the system of exchange rate the country will adopt. Danladi, Akomolafe, Babalola and Akpan (2015) discovered that the international competitiveness is primarily determined by the value of a countries currency in terms of exchange rate, instability noticeable with this rate leads to either depreciation or appreciation.

Countries economic objective is a major determinant of the kind/type of exchange rate that is to be practiced, the 1999 report from the central bank of Nigeria (CBN) has it that the volume of domestic production, level of export and quantity of foreign reserve the home country has in other denomination determines the strength of currency in Nigeria. Whenever the volume of domestic currency reduces then depreciation sets in as a result of an increase in importation of essential goods needed for production to take place. Several programs have been introduced in Nigeria in order to stabilize the economy, the mid-1986 witnessed the introduction of adjustment programme this programe was intended to stimulate export promote growth and investment. Several measures have been taken in the production sector of the economy which is intended to improve competition and mitigate administrative controls, exchange rate competition is a crucial element in deregulation of exchange rate, several policies emerged which allowed market forces (supply and demand) determine the rate of one Naira to other currency.

Several measures have been undertaken to make the exchange rate more market based one of which Akinlo and Lawal (2015) discovered that a unification of official and market exchange rates helps in stabilizing the countries exchange rate. The government also introduced a system whereby the interbank system supervised by the CBN determines exchange rate on a daily basis, the policy introduced is intended to propel production in the manufacturing sector to spur up, increase employment and reduce inflation. According to Clement (2015) a shift in finance is noticeable from the productive sector to trading sub-sector which occurred as a result of depreciation in the naira exchange rate, this result to a decline in foreign exchange utilization in equipment, imported raw material and machinery while an increase was identified in the utilization of finished goods 2001 and 2011. Basically, there are two school of thought regarding changes in exchange rate, we have the and risk portfolio school and the traditional school, the latter holds that fluctuation increases trade which reduces trade flows, it was discovered from previous empirical review of Oyovwi and Ukavwe (2015) that fluctuation increases risk attached to trade which increase the indecision as regards profits on contracts denominated in foreign denomination as regards to films investment decision which will result to a reduction in foreign trade to a level lower than what it was originally. All this will make foreign traders (risk-natural agents and risk-adverse) to make use of the various risk diversification technique to hedge against risk that might affect their investment and production factors, investors whose investment is dominated in foreign currency need to divert their foreign portfolio and direct investment to lower risk local market from high risk foreign market, on the other hand the risk portfolio school of thought postulate that greater opportunity to making profit exist as a result of higher risk which is present when currency fluctuation takes place. This school of thought is composed of complexity of multiple school of thought. The work of De Grauwe (1988) attest to the fact that increased export arises as a result of fluctuation in exchange rate which unambiguously reduces the total utility (satisfaction) that is to be derived from goods exported, which might result to an increase in export resulting to an increase in marginal utility. There will be a reduction in the value of export since the degree of uncertainty is not constant leading to substitution effect and no income effect in the economy, nonetheless whenever the degree of aversion increases the income effect will be shrined making exporters increase the volume of there export as a result of the volatility that is noticeable with exchange rate, De Grauwe (1988) argued that the opportunities involved in making high profit can be linked with exporters making excessive profit from favorable exchange rate, which is accompanied with increased output.

The manufacturing industry is affected by the fluctuations of the home countries exchange rate, technology and production is affected in both ways, a negative effect affects the economy which spills over to the service and agricultural sector of the economy, the cost of production is adversely affected

when exchange rate is depreciating, resulting to inadequate infrastructure and domestic sources thus, given imported foreign goods more market based in the home country than locally made goods (less competitive) all this are factors that leads to currency depreciation in any country and the advantage of exporting goods will be neglected. The crowding out effect on investment is made feasible when the country dover-depend solely on importation of capital-intensive goods. In Nigeria, underutilization and low productivity experienced in the industrial sector is attributed to factors such as; available exchange rate and mismanagement of real exchange rate (Clement 2015). Instability in macro-economic policies results to over valuation of exchange rate causing restrictions as to how human capital, trade and transfer of technological knowhow can be fully implemented in the country, all this pose a major constrain to the full achievement of stable exchange rate in the country which adversely affect the macro economic environment in the country. According to Isibor, Olokoyo, Arogundade, Osuma and Ndigwe (2019) the fixed and flexible regime adopted in Nigeria to control the fluctuation in exchange rate have proven to be futile leading to the poor performance of various sectors in the economy. In financial market that is underdeveloped the large imposed welfare cost, reduction in foreign trade, decline in investment decision, cash-flow constrains is faced by multinational companies all this are consequences of exchange rate fluctuation which hinders every possibility of growth in the economy. Effective allocation of resources is been affected whenever there is prolonged fluctuation in exchange rate, the private and public sector seek stability in the countries exchange rate because it affects key macroeconomic indicators as domestic price of goods is affected, investment decision is affected, and finally profit on goods and services is affected likewise all this gives a clear picture of why stability of this rate is sort for, thus this paper intends to investigate exchange rate fluctuation and sectorial output in Nigeria.

2.1   Conceptual Review
2.1.1   Exchange Rate
Several authors have defined exchange rate to be the value at which one currency is interchanged for another currency with respect to the market prevailing rate as at that particular period of time. The work of Fapetu and Oloyede, (2014) cited in Stephen, (2017) and Isibor, Olokoyo, Arogundade, Osuma and Ndigwe (2019) sees exchange rate as the value (measured by price) of one currency in relation to another, several countries have set different bench marks this benchmark is allowed to fluctuate as the case may be for different countries as a result of changes in the relative price of product. Whenever a country's exchange rate is fluctuating at a particular static value, or fluctuating within a particular range, or is around a constant par value then that country is operating on a fixed exchange rate but when a country exchange rate is not fixed that is when the rate is floating, this system is practiced when the government or the regulatory institution does not have any relationship on how to stabilize this rate (Okorontah & Odoemena, 2016).

2.1.2 Exchange Rate Regime in Nigeria
Within the past decades exchange rate have undergone significant changes, the early 1960s witnessed the fixed exchange rate system, in this system the dollar was fixed and the volume of goods imported were based on specifications, this ear witnessed restrictions in the volume of goods imported into the country, this ear also witnessed strict administrative control tool on foreign exchange as at that period of time. In the year 1978 witnessed another era in the countries exchange rate regime, in this era the Naira was pegged to 12 baskets, this was fixed with British Pound at par. As at early 1980s Nigeria economy was not able to meet up its international financial needs as a result of the fall in the price of oil in the international capital market this led to the reduction of receipts from foreign exchange. In the year 1982 stabilisation act was passed to bill in order to reduce the negative effect encountered in the previous year, this act is aimed at improving the value of Naira against other foreign currency, this act failed to address some key economic problem, a few of which are: bills which is unpaid with respect to international trade with respect to the fall in the price of oil. In 1986, a flexible and realistic exchange rate was introduced, this led to the Structural Adjustment Programme (SAP).

2.1.3 Previous Exchange Rate Development

Prior to 1967 Nigeria foreign exchange was basically done using the pounds sterling but the year 1973 witnessed a change from the use of pounds to naira, this period also witnessed the fixed exchange regime between Nigeria Naira and pounds sterling with US dollar, which was done with the aim of stabilizing foreign exchange (Obadan, 1994). Because of the fluctuation in exchange rate and the rate of unemployment countries were forced to convert their currency to back to their home currencies. In the year 1972 to 1994 Nigeria monetary authorities made Naira to be at par with that of US dollar, between that period the year 1981 witnessed oil boom in which Nigeria reserve held in foreign denomination was $1 billion in totality, in that same period ₦1.00 was exchanged for $0.65 five years after the year 1985 witnessed a period whereby one currency was used for international transaction, in this regard one naira was quoted against the US dollar. The work of Ikpefan, Isibor, and Okafor (2016) pointed out that because of the high incidence that is attached to quotation in the foreign exchange, in 1986 the structural adjustment program (SAP) was introduced this program also witnessed the introduction of second-tier foreign exchange market (SFEM), within this period floating exchange rate came to been and the fixed exchange rate was no longer practiced, in this period banks were involved in caring out transactions between themselves not until 1989 which was discouraged because of there incapability and instability in the foreign market.

In the year 1990, weighted average was used by the interbank foreign exchange market (IFEM) which emerged because of liberalisation in Naira exchange rate, in the latter part of the year the dutch auction system was also presented to mitigate fluctuation in the foreign market and criminalities in the parallel market, the year 1994 also witnessed a period where by the Naira against the dollar was fixed at ₦21.1960 to that of one dollar. Because of depreciation and other macro-economic fluctuation, the dual exchange rate policy was implemented, this policy is aimed at moderating other factors that can make the parallel market to fluctuate. Decree No 17 of 195 was passed which recognised the unanimousness of foreign exchange for people to trade privately, the year 1996 and 1997 witnessed a drift in the price of 1 dollar from ₦80.00 to ₦85.00. Nigeria Federal Government replaced the dual system of exchange rate in 2000, this structure was replaced by merging the official rate with that of autonomous foreign rate, this system witnessed the ear in which 1 US dollar in the parallel market was exchanged for ₦128.00 as at 2001 having scrapped the old official rate of 1 US dollar to ₦22.00 while in year 2003 witnessed a sharp depreciation in Naira as 1 US dollar was being exchanged for ₦131.00. According to Olokoyo, Isibor, Oladeji and Edosomwan (2016) after the dual system era the following year, 2001 witnessed the retail Dutch system, in this system end- users of foreign currency make use the banks to ease in the facilitation of getting their foreign currency demand, five years after the introduction of wholesale Dutch auction system by the Central bank came to being.

2.1.4 Management of Exchange Rate

A cautious effort at making sure that reserve of the country with international institution increases as available foreign resources increases as well, this cautious effort helps to reduce exchange rate volatility and other shocks that is inherent in foreign exchange. The economy of Nigeria has been tagged to be a mono economy in which crude oil is basically the commodity that is been exported while they depend solely on finished product for consumption, this makes demand for foreign currency to be on the high side, virtually all sectors in the country demand for foreign goods in the production process, fluctuation in international currency affects the purchasing power of the local currency. It was unravelled by Yaqub, (2010) that the demand for foreign denominations makes the value of the home currency rise and denigrate in accordance to its demand, there have been several government intervention programs that was initiated in order to stabilise this rate, stabilise the economy of Nigeria which helps in diversifying the economy of the country. Wilson and Choga (2015) discovered that whenever dollar to naira rate increases it will cause scarcity in the economy which will eventually lead to inflation and stagflation thereby affecting industrial output.

Overtime, Nigeria economy have shifted away from depending on agricultural product to crude oil as a major source of income and export commodity, the agricultural sector of Nigeria remains in abate as a result of abject neglect. This neglect has made output of productive sector to be poorly affected and redundant, Nigeria exchange rate have depreciated because of series of several adverse effect that have taken place in the oil market, the value of a barrel of oil have depreciated because of adverse shocks that have taken place in the foreign oil market making exchange rate unable. There have been

several studies on how Nigeria economy can grow as a result of effective exchange rate management but very few have examined how the management of this rate affect individual sector in the country.

2.1.5 Export Performance in Nigeria

A major avenue that developing country utilise to harness revenue is by exporting locally made goods, according to Owuru and Farayibi (2016) monies gotten from exporting product have led to economic progression which eventually result to export-led growth. On a global scale country that involve themselves in exporting goods and services opens up another avenue to raise countries national income and earnings capacity. Commodities exported globally can be classified into two which is non-oil and oil export commodity. Since export is of great demand eventually people will engage themselves in productive activities that will help to increase output which will lead to more revenue, since more revenue occur as a result of the increase in goods and services. Since full employment is to be attained in the economy, its then necessary waste should be limited by productively employing available resources to produce more of that particular product that is been exported to foreign country. According to Owuru and Farayibi, (2016) the agricultural sector became obsolete as a result of oil discovery in Nigeria, emergence of premium spirit in 1970s the country has resulted to decline in the goods produced which cut down active labour force.

2.2 Theoretical Review

2.2.1 The Traditional School of Thought

This school of thought holds that trade flow is depressed as a result of risk inherent in trade volatility, this theory was propounded by Cote in the year 1994. This theory holds that uncertainty attributed with contracts denominated in foreign currency is greatly influenced by exchange rate volatility which reduces international trade to levels lower than would otherwise exist without exchange rate volatility (Farrel, DeRosa, & McCown 1983), making risk-natural agents re-direct their activity from high risk foreign markets to the lower risk home market having examined the degree of risk and opportunity to hedge risk and the currency in which contracts are denominated. The pressure and degree of risk depends on firm's ability to edge, factors of production (local and imported) and contracts done using foreign currency. The volume of exports and trade in foreign trade is greatly influenced by exchange rate volatility. Traders react to this volatility in different ways depending on their risk level. Both the demand and supply curve are affected by volatility attributed with exchange rate, as an increase in exchange rate will shift both curves downwards decreasing both price and quantity whereas, whenever risk is being born by exporter the price and quantity increases (Hooper, & Kohlhagen 1978).

2.2.2 Endogenous Growth Theory

The endogenous growth theory spearheaded by Romer (1986), propose that intrinsic factors significantly engender economic growth through innovation and investment in human capital (Lucas, 1988; Grossman & Helpman, 1991). The highlights of the theory include the beneficial effect of positive spill over externalities of a knowledge based, innovative real sector which, stimulates productivity and economic growth across all sectors in the country.

2.2.3 Risk-Portfolio School of Thought

This school of thought was propounded by De Grauwe (1988) they see the assumption of the traditional school of thought as unrealistic, the theory postulates that higher risks present an opportunity for profit in international trade which should increase trade. The theory also pointed out that risk-neutral persons are attracted by higher profits which inferably means higher risk as exchange rates fluctuation presents opportunities for diversification which increase profits. Economic agents return is effectively maximized when their investment is being diversified as they engage in risk environments that matches their expected returns (De Grauwe, 1988). For high-risk adverse agent, increased exchange rate volatility would increase the utility of export revenue and encourage exports from exporting country in order to avoid reduced revenues. For the low-risk adverse agent, exchange rate volatility presents greater risks by reducing exports and switching of resources within other sectors in the economy.

2.2.4 Dependency Theory

This theory is based on the relationship that is feasible between two countries as no country is self-sustainable/self-dependent, that is, one country is depended on the other for its economic need and sustainability which eventually lead to economic development. This theory also states that financial

resources flow from poor country to those country that are wealthy in nature, which automatically enrich wealthy state at the expense of the poor country. Policies that govern less developed country are been dictated and formulated by developed countries.

2.2.5 The Traditional Flow Model

This theory was propounded by by Mundell (1962) and Fleming (1962) it's also known as the balance of payment model, this model postulates that equilibrium is achieved when demand for foreign exchange equal its supply. Domestic demand for foreign goods and services is determined by domestic residents' income. According to Jhingan, (2004) favourable balance of payment raises exchange rate under free exchange rate regime, he also stated that the balance of payment of a country determines its exchange rate, this implies that the supply and demand for foreign currency determines countries exchange rate.

2.3 Empirical Review

Okafor Adegbite and Babajide (2018) examines how industrial output affect inflation, and conversion rate, the study made use of quarterly data from 1981-2015, SVAR econometric technique was used to capture shocks on industrial output, it was discovered in the fourth quarter that a positive relationship emerged after the negative trend it took right from the first quarter to that of the fourth quarter, for industrial sector to grow there is need to ensure price stability by making sure that belligerent steps are taken to reduce exchange rate fluctuation. Faleiros, da Silva, and Nakaguma (2016) embarked on a research on how exchange rate affects Brazilian agroallied and manufacturing sector if it appreciates or depreciate affects output in this sector. The study utilised Generalized Methods of Moments (GMM) and attuned how labour productivity affect exchange rate-export sector 1996-2011. Infiltration to other economies is affected by variation in Brazilian exchange rate as well as that of labour productivity. Amassona and Odeniyi (2016) examined foreign transaction and the value of money on economic advancement in Nigeria. The model was formulated to effectively account for variations inherent with the data specified between the period 1970-2013, after which regression technique and the error correction model was utilised to analyse data, in the short run fluctuation is noticeable between exchange rate and the proxy used to measure economic development, this arises as a result of government involvement in trying to influence exchange rate with the full intention of moderating international trade. Nnamocha, Benneth, Andrew and Isaiah (2017) investigated disbursement of foreign exchange and foreign reserves in Nigeria and how it affects the industrial sector in Nigeria, data used for the study was for a period of 34 years, foreign currency disbursement was discovered to substantial and propel the growth of industrial sector in the country, secondly, the rate of foreign currency with ratio n to that of the local currency was discovered to be substantial which propel economic growth. The study suggests that for external reserve to grow then there is need for industrial sector to be given some level of sentiments in terms of the goods and services they want to import, steps should also be taken to tackle the various crises that makes Naira to fluctuate. Bahmani-Oskooee and Aftab (2017) investigates exchange rate fluctuation on trade in Malaysia, they took a sample of 54 industries, the study used Non-linear Autoregressive Distributed Lag (NARDL) as the econometric technique and discovered that the 54 industries had a significant relationship with 63 Malaysian importing industries and asymmetric effect was identified between one-third of the industries who engage in import and export of agricultural product in Malaysia. Ajinaja, Popoola and Ogunlade (2017) empirically examine the relationship between fluctuation in relation to exchange rate and how it affects key variable in Nigeria economy, fluctuation in international trade (which was captured by Naira exchange rate) and investment from abroad affects performance in the export sector of the country positively, after the research made use of OLS statistical analysis, it was also discovered that goods produced in the country also have substantial association with export performance. Amassoma and Odeniyi (2016) reciprocate a similar research that Clement (2015) investigated but this time emphasis is placed more on the average Nigeria purchasing power. The fluctuation in exchange rate have posed to be a major barrier to business tycoons in Nigeria because it affects how decision will be made in relation to purchase of capital products, it also affect foreign investment, this were the major reasons that lead Amassoma and Odeniyi (2016) to examine the effect of exchange rate fluctuation on policy making institutions and monetary authorities, the study made use of standard deviation method to analyse forty-three annual data span on the variables under investigation. The result of the ECM showed that a substantial relationship is seen between nominal

Naira exchange rate and economic output in Nigeria. Meanwhile in order to infuriate exchange rate positively government should pay close attention to other macroeconomic variables that correlate with this exchange rate in the country most especially the price of oil in the international foreign market. How foreign exchange affect coca-export in Nigeria was investigated by Dominic (2017), data which span from 1980-2013 was utilized in the study which was generated from generated from World Bank and Food and Agricultural Organization (FAO). The study adopted various diagnostic test on the employed variable and it was discovered that at 7% a long run equilibrium was discovered, it was also seen that world price of cocoa, agricultural export, trade openness and exchange rate if all are taken together they all affect cocoa export in Nigeria. Based on this the study recommend that farmers need to have free and unrestricted asses to government facilities and the market needs to be actively involved to determine exchange rate.

In Nigeria Salisu, Norashidah, Umar and Muktar (2017) investigates if long run integration exists between export of raw material, exchange rate and economic growth, a 32 years data span was used for empirical analysis, while the fundamental objective of the study was achieved with the use of Auto Regressive Distributed Lags (ARDL), it was discovered that the two-model presented in the study were both co-integrated in the long and short run. Secondly, raw material extracted from agricultural product has a negative and in-statistical relationship with GDP. The study further suggests that because of the negative result obtained there is need for Nigeria government to tailor transformation policy towards development of the infrastructural sector and promotion of export commodity. Two sector (agricultural and the manufacturing sector) was looked into by Isibor, Olokoyo, Arogundade, Osuma and Ndigwe (2019) to examine the effect of how the management of exchange rate have affect them, thirty-four (34) years secondary data was utilized, the study made use of Least Square technique and it was revealed from the findings that a negative and insignificant relationship is identified in the manufacturing sector while the opposite is identified in the agricultural sector, the study conclude by recommending that policies that will stimulate manufacturing sector should be created. Tams-Alasia., Olokoyo, Okoye and Ejemeyovwi (2018) examined how deregulation of exchange rate affects the manufacturing sector of Nigeria, the study made use of 36 data span from 1980-2016, after the data passed several tests and it was discovered from the ECM result that exchange rate has a negative long run effect on manufacturing output, the causal test shows that a uni-directional causal relationship was established between exchange and manufacturing output. This study recommends that the monetary authority should effectively stabilise exchange rate via effective management and appropriate monetary policy tools. Oye, Lawal, Eneogu, and IseOlorunkanmi, (2018), thirty-year (30) data span collected from National Bureau of Statistics was utilized in there study, currency devaluation was proxied as the endogenous variable while with Real Agricultural Exports, Agricultural Gross Domestic Product and Price of Export served as the exogenous variable and addition of other variable such as inflation which was measured by the Consumer Price Index (CPI) after conducting every necessary test the Toda and Yamamoto causality test reveals that price of exports and real effective exchange rate has a unidirectional causality, it was also discovered that gross exports earnings has a significant relationship with exchange rate devaluation which also showed that the predictive capability of the price of exportable commodity can be used to predict present values of agricultural product.

3.0 METHODOLOGY
3.1 Research Design
Measurement is a prerequisite for any statistical research work to be effectively carried out this then leads to designing an appropriate research design that will aid this paper. Research design can be define as a framework or a plan that shows how a particular project is to be carried out in a systematic manner, in terms of data collection and methods that will be used to analyze the data collected (Baridam 2001) while Koutsoyiannis (2003) opined that research design is the incorporation of mathematics, economics and statistics in other to validate theories and examine economic relationship between parameters, he further explained that the problems we encounter in our life as a result of the economic situation can be solved through the use of econometric method, meanwhile this method needs to be adjusted to measure the appropriate situation at hand, which logically will solve economic situations in the real world.

3.2 Nature and Source of Data

The relationship between exchange rate fluctuation and sectorial output in Nigeria is examined with the use of cross sectional time series data, sectorial output is proxied by agricultural sector contribution to gross domestic product (ASGDP), industrial sector contribution to gross domestic product (ISGDP), construction sector contribution to gross domestic product (CSGDP), trade sector contribution to gross domestic product (TSGDP), service sector contribution to gross domestic product (SSGDP) and exchange rate fluctuation is proxied by Naira exchange rate (EXCR), data were extracted from secondary sources which include annual statistical report of Central Bank of Nigeria and Bulletin.

3.3 Data Collection Method

The method used in collecting data for this study was essentially from the secondary sources. The relevant data were obtained from the Central Bank of Nigeria (CBN) statistical bulletin.

3.4 Operational Definition of Variables

Dependent Variables

Agricultural Sector Contribution to Gross Domestic Product (ASGDP): This is the monetary value of crop production, fishing, forestry and livestock that contributes to gross domestic product of a country on a yearly basis. An increase in the value of Naira to other countries will boost the income that will be generated as a result of exporting goods and services from the home country to foreign trade counterpart. This will also increase agricultural sector contribution to gross domestic product in the country.

Industrial Sector Contribution to Gross Domestic Product (ISGDP): This measures the total amount of money gotten from crude petroleum and natural gas, solid minerals, manufacturing of electrical and electronics, plastic and rubber products, food, beverage and tobacco, chemical and pharmaceutical product which contribute to the gross domestic product in Nigeria. A high exchange rate will connote reduction in the quantity of industrial product it also discourages domestic investment in the country as foreigners will find it difficult to invest in the home country because of the low return it will yield at the end of the waiting period.

Construction Sector Contribution to Gross Domestic Product (CSGDP): This measures the amount at which activities in the construction sector contribute to gross domestic product. A decrease in exchange rate will make it possible for construction company import materials that will aid capital equipment needed for infrastructural development in the country, the decrease identified with this rate will help to boost the contribution of construction sector in the country.

Trade Sector Contribution to Gross Domestic Product (TSGDP): This measures the sum total of the economy that engage itself with import or export of goods, this sector also provides tradeable services either tangible or intangible, the trade sector depends on the value of trade partner foreign currency in order to effectively effect their transactions. An upsurge in the volume of exportable tradable product will lead to a stable value of domestic currency in relation to foreign currency, thus, resulting to appreciation of the home currency while a decrease in the volume of exportable product will result to depreciation of home currency which deters growth.

Service Sector Contribution to Gross Domestic Product (SSGDP): This measures the monetary sum total contribution of various services provided within the country which ranges from road transport, rail pipeline transport, air transport, services derived from post courier services, to that of finance, insurance service, real estate, public administration, human health and social services, education, real estate, professional scientific and technical services all this contribute to the proportion at which service sector contribution to gross domestic product.

Independent Variable:

Exchange Rate (EXCR): This measures the value of one currency (home currency) in relation to that of another currency (foreign currency), this currency appreciates and depreciate on a daily basis this is as a result of the fluctuations with macro-economic variables and forces of demand and supply of both local and foreign currency. High exchange rate means depreciation this discourages investment which affects different sectors in the economy, while a low exchange rate means appreciation this encourages local industries in the country.

3.5 Method of Data Analysis

This study employs the following statistical tools to achieve the aims and objectives of the study. Firstly, unit root test will be applied using the augmented dickey – fuller test. Secondly, was the Johansen co-integration test will be used to ascertain the long-run association between variables. Thirdly, the error correction model (ECM) will be used to check co-integration association. Lastly, the granger causality will be employed to ascertain the causal association. **Granger Causality:** This is a statistical technique based on forecast or prognosis. A variable X granger causes another variable Y that is changes in Variable X is used to forecast Variable Y. It is used to check causal relationship.

Decision Rule: Reject H_0 when the p-value $< \alpha$. Do not reject H_0 when p-value $> \alpha$.

3.6 Model Specification

The model used in this paper is specified in three forms.

The Functional form of the model:

ASGDP= F (EXCR) ………. (1)

ISGDP= F (EXCR) ………. (2)

CSGDP= F (EXCR) ………. (3)

TSGDP= F (EXCR) ………. (4)

SSGDP= F (EXCR) ………. (5)

Where:

ASGDP = Agricultural Sector Contribution to Gross Domestic Product

ISGDP = Industrial Sector Contribution to Gross Domestic Product

CSGDP = Construction Sector Contribution to Gross Domestic Product

TSGDP = Trade Sector Contribution to Gross Domestic Product

SSGDP = Service Sector Contribution to Gross Domestic Product

EXCR = Exchange Rate

It is imperative to include the estimation parameters; thus, we rewrite the equations (1,) as follows:

ASGDP= $\beta_0 + \beta_1 EXCR_t + Ui$…………. (6)

ISGDP= $\alpha_0 + \alpha_2 EXCR_t + Ui$……………(7)

CSGDP= $ч_0 + ч_3 EXCR_t + Ui$…………. (8)

TSGDP= $\sigma_0 + \sigma_4 EXCR_t + Ui$…………. (9)

SSGDP= $д_0 + д_1 EXCR_t + Ui$…………. (10)

Where,

ASGDP = Agricultural Sector Contribution to Gross Domestic Product

ISGDP = Industrial Sector Contribution to Gross Domestic Product

CSGDP = Construction Sector Contribution to Gross Domestic Product

TSGDP = Trade Sector Contribution to Gross Domestic Product

SSGDP = Service Sector Contribution to Gross Domestic Product

EXCR = Exchange Rate

βo = constant or intercept

Ui = error term

$\beta_1, > \beta_5$= estimation of parameters for the respective independent variables.

3.7 Apriori Expectation

Based on theories and empirical studies, the predictor variables have varying relationship with the dependent criterion variables which is therefore mathematically stated as: $\beta_1 > 0$, $\alpha_2 > 0$, $ч_3 > 0$, $\sigma_4 > 0$, $д_5 > 0$. The above signifies a positive relationship and movement of exogenous variables such as agricultural sector contribution to gross domestic product (ASGDP), industrial sector contribution to gross domestic product (ISGDP), construction sector contribution to gross domestic product (CSGDP), trade sector contribution to gross domestic product (TSGDP), service sector contribution to gross domestic product (SSGDP) and currency on exchange rate.

4.0 RESULTS AND DISCUSSION OF FINDINGS

4.1 Descriptive Statistics

The Table below is used to describe some basic measure of central tendency and the nature of data on EXCR, ASGDP, ISGDP, CSGDP, TSGDP, SSGDP.

Table 4.1

	EXCR	ASGDP	ISGDP	CSGDP	TSGDP	SSGDP
Mean	104.9520	2383294.	2219364.	552397.7	1889809.	3996978.
Median	118.5669	4251.520	2178.510	191.0100	1494.240	3216.980
Maximum	306.9206	31904141	30882796	8996895.	22509264	49917396
Minimum	0.893800	34.24000	51.08000	6.100000	17.77000	83.03000
Std. Dev.	92.14589	7937229.	7444142.	1917194.	6248563.	13238713
Skewness	0.694193	3.039606	3.107954	3.443266	2.961609	2.979138
Kurtosis	2.752392	10.42666	10.97908	13.85490	9.775483	9.921329
Jarque-Bera	2.900518	134.3302	149.1922	240.9941	118.1129	121.6335
Probability	0.234510	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	3673.321	83415286	77677730	19333920	66143325	1.40E+08
Sum Sq. Dev.	288689.4	2.14E+15	1.88E+15	1.25E+14	1.33E+15	5.96E+15
Observations	36	36	36	36	36	36

Source: E-views Output.

The highest mean value in the table above is that of construction sector contribution to gross domestic product (CSGDP) with the value 552397.7, followed by that of service sector contribution to gross domestic product (SSGDP) with the value 3996978, then that of agricultural sector contribution to gross domestic product (ASGDP) with the value 2383294, following that is the industrial sector contribution to gross domestic product (ISGDP) having 2219364, as the mean then trade sector contribution to gross domestic product (TSGDP) 1889809 and finally exchange rate (EXCR) 104.9520. The lowest median is that of EXCR with 118.5669 value followed by 1TSGDP with 494.240 median value followed by CSGDP with 191.0100 value, then followed by ISGDP with 2178.510 median value, then SSGDP with 3216.980 median value and finally ASGDP with 4251.520 having the highest median value.

SSGDP have the highest maximum value of 4991739, followed by ASGDP 31904141 and then ISGDP with 930882796 maximum value, then TSGDP with 22509264 max value, then CSGDP 8996895, finally EXCR with 306.9206. EXCR has the lowest point of deviation (092.14589) which is measured by Std. Dev, followed by CSGDP 1917194 then TSGDP with 6248563, followed by ISGDP 7444142, ASGDP with 7937229 and finally SSGDP with 13238713 Std. Dev. **Skewness:** The highest is CSDGP 3.443266, followed by ISGDP 3.107954, then ASGDP 3.039606, SSGDP 2.979138 and EXCR having the lowest skewness of 0.694193. **Kurtosis:** CSGDP has the highest kurtosis of 13.85490, followed by ISGDP 10.97908, then ASGDP with 10.42666 followed by SSGDP 9.921329, TSGDP 9.775483 and finally EXCR 2.752392. **Jarque-Bera:** The test showed that ASGDP 83415286 has the highest (JB value), followed by EPR with 2.986340, followed by CEXR 2.664413 and finally TOI 0.119080, the total observations for the variables is 35.

4.2 Phillips-Perron (PP) Unit Root Test

In order to test for the order of stationarity between EXCR, ASGDP, ISGDP, CSGDP, TSGDP, SSGDP. variable used, the PP test will be used and the order of stationarity will help in ascertaining the next tool to be employed.

Table 4.2 Phillips-Perron (PP) Test Output

Variable	PP test statistic	Critical Value 5%			Order of Integration	
		1%	5%	10%		Prob.
D(EXCR)	-4.986718	-4.262735	-3.552973	-3.209642	I(1)	0.0192
D(ASGDP)	-5.401365	-4.262735	-3.552973	-3.209642	I(1)	0.0006
D(ISGDP)	-4.700324	-4.262735	-3.552973	-3.209642	I(1)	0.0034
D(CSGDP)	-4.395808	-4.262735	-3.552973	-3.209642	I(1)	0.0092
D(TSGDP)	-6.088559	-4.262735	-3.552973	-3.209642	I(1)	0.0001
D(CSGDP)	-5.820651	-4.262735	-3.552973	-3.209642	I(1)	0.0002

Source: E-views Output.

From the report above table 4.3 EXCR have a Phillips-Perron (PP) test statistics value of -4.986718 which is greater than the critical value at 5% level of significance, this portrays that at level one, stationarity is attained with a p-value of 0.0192, followed by ASGDP with a PP statistic of -5.401365

which is greater than the three critical values. ISGDP has a P-value of 0.0034 and a PP value of -4.700324 which became stationary at level one. The value of CSGDP has a PP-value of -4.395808 which is higher than the judgmental level of significance 0.009. TSDGP AND CSGDP have probability value of 0.0001 and 0.0002, with a PP test statistics value of -6.088559 and -5.820651.

4.3 Summary of Johansen Co-Integration Test for all Five Sectors
Fusing all the above co-integration test results into a single table as reported below
Table 4.3 Johansen Co-Integration Test

Sectors	Hypothesized no CE's	Eigenvalue	Trace-Stat	5% Critical Value	Prob.**
ASGDP	None *	0.485556	31.45163	15.49471	11.79205
	At most 1	0.272540	10.18226	3.841466	1.750683
ISGDP	None *	0.475758	29.70587	15.49471	0.0002
	At most 1	0.246108	9.040211	3.841466	0.0026
CSGDP	None *	0.492717	25.18434	15.49471	0.0013
	At most 1	0.102664	3.466407	3.841466	0.0626
TSGDP	None *	0.530356	35.33095	15.49471	0.0000
	At most 1	0.294121	11.14597	3.841466	0.0008
ASGDP	None *	0.511678	33.84656	15.49471	0.0000
	At most 1	0.288887	10.90956	3.841466	0.0010

Source: Authors computation from E-views Output.

The trace statistics (31.45163 & 10.18226) is higher than the critical value at 5% level (15.49471 and 3.841466) in two different hypothesized situations judging with the p-value of (0.0001 and 0.0014) significant association is attainable in the model 1 above, this makes us conclude that there is long run equilibrium and mutual stochastic trend is attained between the variable, this further makes this paper conduct the error correction model (ECM). The model. Going by the trace statistics result of 29.70587 and 9.040211 in model two above we can deduce that these values are higher than the critical value of 15.49471 and 3.841466 at 5% level of significance in two different hypothesized situations in model 2 above, thus, the study therefore conclude that two co-integrating equation is noticeable in the model above, this means there is mutual stochastic trend is attained between the variable thus, the conduct error correction model (ECM) was further used for analysis. The ECM result in model three in the table above report that the critical values of 15.49471 is less than the trace value of 25.18434 in one hypothesized model three above, this suggest that one co-integrating equation exists. In model 4 and 5 the above table indicate the prevalence of two co-integrating equations since the trace statistic values of (35.33095 & 11.14597) (33.84656 and 10.90956) is greater (>) at 0.05% than the critical values of (15.49471 & 3.841466) (15.49471 & 3.841466). The probability levels of the two co-integrating equations which are all significant at 0.05 level confirms prevalence of significant long run relationship.

This leads to other test such as test for the adjustment of the discrepancies between the short and long run popularly known as the error correction model. This insinuates that the employed variable significantly relates with each other in the presence of variation.

4.4 Error Correction Model Estimates (ECM)
The presence of co-integration necessitates the need to check for adjustment between the short run and the long run for each model series.

Table 4.4   Result of ECM for Model 1

Dependent Variable: ASGDP
Method: Least Squares
Date: 28/01/21   Time: 17:33
Sample (adjusted): 1986 2020
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	91.58909	9.873861	9.275914	0.0000
EXCR	6.700006	1.210006	5.537168	0.0000
ECM(-1)	-0.172734	0.038383	-4.500274	0.0001
R-squared	0.663325	Mean dependent var		108.0126
Adjusted R-squared	0.641604	S.D. dependent var		91.70817
S.E. of regression	54.90216	Akaike info criterion		10.93308
Sum squared resid	93441.65	Schwarz criterion		11.06776
Log likelihood	-182.8624	Hannan-Quinn criter.		10.97901
F-statistic	30.53850	Durbin-Watson stat		1.020006
Prob(F-statistic)	0.000000			

Source: E-views Output

Global Statistics

The result of the global statistics presented in the table above the adjusted R^2 which is 0.663325, this means the independent variable account for about 66% in the model while the remaining 34% is accounted for by other variables that is not captured in the model.

Relative Statistic ECM

ECM shows that exchange rate (EXCR) exhibit strong influence on agricultural sector contribution to gross domestic product (ASGDP).

Table 4.5   Result of ECM for Model II

Dependent Variable: ISGDP
Method: Least Squares
Date: 28/01/21   Time: 17:34
Sample (adjusted): 1986 2020
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	91.66747	9.808411	9.345802	0.0000
EXCR	7.160006	1.280006	5.593728	0.0000
ECM(-1)	-0.181153	0.037585	-4.819821	0.0001
R-squared	0.667146	Mean dependent var		108.0126
Adjusted R-squared	0.645672	S.D. dependent var		91.70817
S.E. of regression	54.58971	Akaike info criterion		10.92167
Sum squared resid	92381.13	Schwarz criterion		11.05634
Log likelihood	-182.6683	Hannan-Quinn criter.		10.96759
F-statistic	31.06702	Durbin-Watson stat		1.987139
Prob(F-statistic)	0.000000			

Source: E-views Output

Global Statistics

From the table above the adjusted R^2 which is 0.667146, this means the independent variable account for about 67% in the model while the remaining 33% is accounted for by other variables that is not captured in the model two above. The ECM coefficient is -0.18 meaning that 88 percent disequilibrium is being corrected within a year.

Relative Statistic ECM

We also discover that this influence is significant, therefore, we affirm that exchange rate (EXCR)

play a significant role in determining industrial sector contribution to gross domestic product (ISGDP).

Table 4.6   Result of ECM for Model III

Dependent Variable: CSGDP
Method: Least Squares
Date: 28/01/21   Time: 17:35
Sample (adjusted): 1986 2020
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	92.45310	9.863888	9.372886	0.0000
EXCR	27.40005	4.990006	5.490985	0.0000
ECM(-1)	-0.191994	0.046230	-4.153018	0.0001
R-squared	0.661049	Mean dependent var		108.0126
Adjusted R-squared	0.639181	S.D. dependent var		91.70817
S.E. of regression	55.08744	Akaike info criterion		10.93982
Sum squared resid	94073.40	Schwarz criterion		11.07450
Log likelihood	-182.9769	Hannan-Quinn criter.		10.98575
F-statistic	30.22933	Durbin-Watson stat		1.975057
Prob(F-statistic)	0.000000			

Source: E-views Output

Global Statistics

The R^2 which is 0.661049, making the model fit for decision making, it also means collectively all the predictor variable account for 66% while the remaining 34% cannot be accounted for in the model specified. Whereas at 5% level the speed of adjustment has a negative sign this depicts that the speed of adjustment is kept at approximately 19%.

Relative Statistic ECM

ECM shows that exchange rate (EXCR) exhibit strong influence on construction sector contribution to gross domestic product (CSGDP) in Nigeria with some deviation in the degree of the influence.

Table 4.7   Result of ECM for Model IV

Dependent Variable: TSGDP
Method: Least Squares
Date: 28/01/21   Time: 00:59
Sample (adjusted): 1986 2020
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4226042.	1391920.	-3.036124	0.0048
EXCR	57133.83	10636.45	5.371513	0.0000
ECM(-1)	-0.183065	0.043480	-4.209842	0.0003
R-squared	0.508504	Mean dependent var		1945391.
Adjusted R-squared	0.476795	S.D. dependent var		6333743.
S.E. of regression	4581382.	Akaike info criterion		33.59700
Sum squared resid	6.51E+14	Schwarz criterion		33.73168
Log likelihood	-568.1489	Hannan-Quinn criter.		33.64293
F-statistic	16.03638	Durbin-Watson stat		1.883954
Prob(F-statistic)	0.000017			

Source: E-views Output

Global Statistics

From the result above the ECM has a negative sign which was anticipated. Also, all predicator variables account for 50.85% of variation in trade sector contribution to gross domestic product, this implies that the model is suitable for prediction purpose.

Relative Statistic ECM

From the table above, it can be seen that exchange rate (EXCR) has a probability value of 0.0000 which is less than 0.05% level of significance, this means exchange rate exhibit a strong influence on trade sector contribution to gross domestic product (TSGDP).

Table 4.8   Result of ECM for Model V

Dependent Variable: SSGDP
Method: Least Squares
Date: 28/01/21   Time: 00:58
Sample (adjusted): 1986 2020
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-9093992.	2936298.	-3.097095	0.0041
EXCR	122281.5	22437.92	5.449769	0.0000
ECM(-1)	-0.184666	0.041513	-4.448390	0.0002

R-squared	0.512745	Mean dependent var		4114533.
Adjusted R-squared	0.481310	S.D. dependent var		13419248
S.E. of regression	9664565.	Akaike info criterion		35.08993
Sum squared resid	2.90E+15	Schwarz criterion		35.22461
Log likelihood	-593.5288	Hannan-Quinn criter.		35.13586
F-statistic	16.31088	Durbin-Watson stat		1.841344
Prob(F-statistic)	0.000014			

Source: E-views Output

Global Statistics

The result in table 4.8 above displays the ECM output which corrects the disequilibrium in the short run. The co-efficient and that of the probability of the ECM is rightly signed by having a negative co-efficient value of -0.184666 and a significant P-value of 0.0002 which implies that the disequilibrium in the short run is corrected in the long run to the tune of -18%.

Relative Statistic ECM

The ECM result above has it that EXCR has a positive and significant relationship with service sector contribution to gross domestic product.

4.5 Pairwise Granger Causality Tests

Table 4.5.1   Causality for Model 1

Pairwise Granger Causality Tests
Date: 28/01/21   Time: 01:31
Sample: 1985 2020
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
ASGDP does not Granger Cause EXCR	33	1.44951	0.2518
EXCR does not Granger Cause ASGDP		7.67670	0.0022

Source: E-views Output.

From the granger causality result above, it can be seen that agricultural sector contribution to gross domestic product (ASGDP) does not cause a change in exchange rate (EXCR), whereas exchange rate (EXCR) cause a change in ASGDP. Thus, the study suggest that uni-directional causality is identified between the variable.

Table 4.5.2   Causality for Model II

Pairwise Granger Causality Tests Date: 28/01/21 Time: 01:34 Sample: 1985 2020 Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
EXCR does not Granger Cause ISGDP	33	7.67867	0.0022
ISGDP does not Granger Cause EXCR		1.45112	0.2514

Source: E-views Output

From the table above direction of causality flow from exchange rate (EXCR) to industrial sector contribution to gross domestic product (ISGDP) but causality ceases to exist between ISGDP and EXCR, this implies that EXCR play a significant role in determining ISGDP.

Table 4.5.3   Causality for Model III

Pairwise Granger Causality Tests Date: 28/01/21 Time: 01:35 Sample: 1985 2020 Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
EXCR does not Granger Cause CSGDP	33	7.67174	0.0022
CSGDP does not Granger Cause EXCR		1.45006	0.2516

Source: E-views Output

From the result above it can be seen that there a uni-directional causality flowing from exchange rate (EXCR) to construction sector contribution to gross domestic product (CSGDP) which signifies that past values of EXCR can predict the future value of EXCR. While past value of CSGDP cannot predict future value of EXCR.

Table 4.5.4   Causality for Model IV

Pairwise Granger Causality Tests Date: 28/01/21 Time: 01:37 Sample: 1985 2020 Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
EXCR does not Granger Cause TSGDP	33	7.67936	0.0022
TSGDP does not Granger Cause EXCR		1.44845	0.2520

Source: E-views Output

The result above shows the presence of uni-directional causality flowing one way from EXCR to TSGDP, but not flowing from TSGDP to EXCR, this means past values of TSGDP cannot predict future value of EXCR, but future value of TSGDP can be predicted by the past values of EXCR.

Table 4.5.5   Causality for Model V

Pairwise Granger Causality Tests Date: 28/01/21 Time: 01:39 Sample: 1985 2020 Lags: 2			
Null Hypothesis:	Obs	F-Statistic	Prob.
EXCR does not Granger Cause SSGDP	33	7.67896	0.0022
SSGDP does not Granger Cause EXCR		1.44861	0.2520

Source: E-views Output

Future value of SSGDP can be predicted with the past values of EXCR, this means causality exist between EXCR and SSGDP but SSGDP does not cause a change in EXCR at 5% level of significance, thus, uni-directional causality exists between EXCR and that of SSGDP.

4.7 Test of Hypotheses

Using 5% confidence level or acceptance and rejection of hypotheses.

Hypothesis 1

$H0_1$: There is no significant relationship between exchange rate and agricultural sector contribution to gross domestic product in Nigeria.

HA_1: There is a significant relationship between exchange rate and agricultural sector contribution to gross domestic product in Nigeria.

Result Interpretation I

Following the result, the ECM above exchange rate (EXCR) exhibited a positive coefficient of 6.700006 alongside a P-value of 0.0000 which is less than 0.05 level of significance, thus suggesting acceptance of the alternate hypotheses, which states that a significant relationship between exchange rate and agricultural sector contribution to gross domestic product (ASGDP) in Nigeria.

Hypothesis II

$H0_2$: Significant relationship does not exist between exchange rate and industrial sector contribution to gross domestic product in Nigeria.

HA_2: Significant relationship exist between exchange rate and industrial sector contribution to gross domestic product in Nigeria.

Result Interpretation II

Following the result, the ECM above exchange rate (EXCR) exhibited a negative coefficient of 7.160006 alongside a P-value of 0.0000 which is less than 0.05 level of significance, thus suggesting acceptance of the alternate hypotheses, which states that significant relationship exist between exchange rate and industrial sector contribution to gross domestic product (ISGDP) in Nigeria.

Hypothesis III

$H0_3$: Exchange rate does not have significant relationship with construction sector contribution to gross domestic product in Nigeria.

HA_3: Exchange rate has significant relationship with construction sector contribution to gross domestic product in Nigeria.

Result Interpretation 3

Following the result, the ECM above exchange rate (EXCR) exhibited a positive coefficient of 27.40005 alongside a P-value of 0.0000 which is less than 0.05 level of significance, thus suggesting acceptance of the alternate hypotheses, which states that significant relationship exist between exchange rate and construction sector contribution to gross domestic product in Nigeria.

Hypothesis IV

$H0_4$: Trade sector contribution to gross domestic product in Nigeria does not significantly influence exchange rate.

HA_4: Trade sector contribution to gross domestic product in Nigeria significantly influence exchange rate.

From the table above, it can be seen that

Result Interpretation IV

Following the ECM result in table above exchange rate (EXCR) has a probability value of 0.0000 which is less than 0.05% level of significance, thus, the study therefore accepts the alternate hypothesis which states that trade sector contribution to gross domestic product (TSGDP) in Nigeria significantly influence exchange rate.

Hypothesis V

$H0_5$: Exchange rate does not significantly affect service sector contribution to gross domestic product in Nigeria.

$H0_5$: Exchange rate significantly affect service sector contribution to gross domestic product in Nigeria.

Result Interpretation

Following the ECM result in table above exchange rate (EXCR) has a probability value of 0.0000 which is less than 0.05% level of significance, thus, the study therefore accepts the alternate hypothesis which states that service sector contribution to gross domestic product in Nigeria.

4.6 IMPLICATION OF RESULT FINDINGS

Exchange rate and agricultural sector contribution to gross domestic product in Nigeria: From the result above it can be seen that exchange rate (EXCR) has a positive co-efficient of 6.700006 which suggest that for every one percent increase in EXCR it will lead to about 6.700006% increase in agricultural sector contribution to gross domestic product (ASGDP), thus, we therefore accept our apriori expectation $\beta_1 > 0$ stated in the model one above. It was discovered from the result that EXCR has a probability value of 0.0000 which is less than 0.05 level of significant thus suggesting acceptance of the alternate hypothesis, which states that there is a significant relationship between exchange rate and agricultural sector contribution to gross domestic product in Nigeria. The positive increase is as a result of the stable exchange rate within the review period which leads to an increase in optimal productive capacity. It was also discovered that monetary value of crop production, fishing, forestry and livestock increased as a result of the favourable exchange rate, making it possible for goods produced locally to be exported for reasonable sum.

Exchange rate and industrial sector contribution to gross domestic product in Nigeria: It was discovered from the ECM result that exchange rate (EXCR) has a positive coefficient of 7.160006, this means for every one percent increase in EXCR it will lead to about 36058.90% increase in industrial sector contribution to gross domestic product (ISGDP). Thus, the apriori $\alpha_2 > 0$ expectation earlier stated is therefore upheld. EXCR also has a significant P-value of 0.0000 which is less than 0.05 level of significant thus suggesting acceptance of the alternate hypothesis, which states that there is a significant relationship between exchange rate and industrial sector is not significant to the contribution to gross domestic product in Nigeria. The positive significant relationship is attributed to stable exchange rate which makes it possible for multinational companies located within the country to be able to import capital equipment for production of further goods and services. The value of Naira exchange rate between the period under review has encouraged companies that are into crude petroleum and natural gas, solid minerals, manufacturing of electrical and electronics, plastic and rubber products, food, beverage and tobacco, chemical and pharmaceutical product contribute substantially to the industrial sector in the country.

Exchange rate and construction sector contribution to and gross domestic product: Exchange rate (EXCR) exhibited a positive coefficient value of 27.40005 alongside a significant P-value of 0.0001 which is less than 0.05 level of significant thus suggesting acceptance of the alternate hypothesis, which states that there is a strong positive influence between exchange rate and construction sector contribution to gross domestic product (CSGDP). This also suggest that for every one percent increase in EXCR it will lead to about 27.40005 to CSGDP, the study therefore accept the positive apriori ($ч_3 > 0$) expectation earlier stated in the model 3. Naira exchange rate was moderated by the foreign exchange management properly thereby making it possible for construction company import materials that will aid capital equipment needed for infrastructural development in the country, the decrease identified with this rate will help to boost the contribution of construction sector in the country.

Exchange rate and trade sector contribution to gross domestic product in Nigeria: Following the report of exchange rate (EXCR) exhibited a positive coefficient of 57133.83, this means for every one percent increase in EXCR it will lead to an increase of about 57133.83% to trade sector contribution to gross domestic product (TSGDP), we therefore accept our earlier anticipated apriori ($\sigma_4 > 0$) expectation. EXCR has a significant P-value of 0.0000 which is less than 0.05 level of significant, thus suggesting acceptance of the alternate hypothesis, which states that there is a significant relationship between exchange rate and trade sector contribution to gross domestic product (TSGDP) in Nigeria. The positive and significant relationship identified is as a result of the volume of local product exported to foreign country increased, causing the value of Naira appreciate making infrastructural facility that will spur up production increase alongside.

Exchange rate and service sector contribution to gross domestic product in Nigeria: It can be seen from the ECM result of model 5 that exchange rate (EXCR) exhibited a positive coefficient of 122281.5 alongside a significant P-value of 0.0000 which is less than 0.05 level of significant thus, suggesting acceptance of the alternate hypothesis, which states that there is a significant relationship between exchange rate and service sector contribution to gross domestic product (SSGDP) in Nigeria. The result suggests that for every one percent increase in EXCR it will lead to about 122281.5%

increase to SSGDP, therefore the result is in accordance with our apriori expectation $\beta_5 > 0$. The various instrument that helps in currency stability lead to the positive contribution exchange rate has on the service sector has on the economy as real estate, power gas, media communication, finance and insurance service actively took advantage of currency rate at different point in time to aim at their bench mark.

5.1 Summary
This paper investigated the relationship between exchange rate fluctuation and sectorial output in Nigeria 1985-2020, various diagnostic test was conducted on the data starting from; descriptive statistics, Phillips-Perron, unit root test, Johansen Co-integration test, error correction model and Granger Causality tests were also used econometric tool for analysis. The result of the error correction model shows that a positive and significant relationship identified between exchange rate (EXCR) and agricultural sector contribution to gross domestic product (ASGDP). The significant relationship is as a result of stable exchange rate within the review period which leads to an increase in optimal productive capacity in Nigeria, agreeing with our earlier anticipated apriori expectation.
It was also discovered that exchange rate (EXCR) has a positive and significant relationship with industrial sector contribution to gross domestic product (ISGDP) which also agreed with our apriori expectation, the positive significant relationship is attributed to stable exchange rate which makes it possible for multinational companies located within the country to be able to import capital equipment for production of further goods and services. The ECM result of the third sector shows that a positive and significant relationship exists between exchange rate (EXCR) and construction sector contribution to gross domestic product (CSGDP), this also agrees with our apriori expectation as the Naira exchange rate was moderated by the foreign exchange management properly thereby making it possible for construction company import materials that will aid capital equipment needed for infrastructural development in the country.
In the fourth sector, a positive and significant relationship is identified between exchange rate (EXCR) and trade sector contribution to gross domestic product (TSGDP), the positive relationship arose as a result of the volume of local product exported to foreign country increased, causing the value of Naira appreciate making infrastructural facility that will spur up production increase alongside finally, in the fifth sector a positive and significant relationship was also identified between exchange rate (EXCR) and service sector contribution to gross domestic product (SSGDP) in Nigeria as the various instrument that helps in currency stability lead to the positive contribution exchange rate has on the service sector has on the economy as real estate, power gas,media communication finance and insurance service actively took advantage of currency rate at different point in time to aim at their bench mark. The causality test shows that the past value of exchange rate (EXCR) can predict future value of each the five-sector represented in model, that is EXCR causes a change in ASGDP, EXCR can predict ISGDP, EXCR causes a change in CSGDP and finally EXCR. Causality does not flow the other way around, that is ASGDP does not causes a change in EXCR, ISGDP cannot predict EXCR, CSGDP does not causes a change in EXCR and finally TSGDP cannot predict future value of EXCR. This suggest that in each of the model there is bi-directional causality flowing in the model.

5.2   CONCLUSION
Official exchange rate seemed to be more important driver of activities in the agricultural sector, industrial sector, construction sector, trade sector and service sector gross domestic product. However, from the foregoing analysis, the impact of exchange rate has been proved not only to be positive but has been found to be a significant factor in influencing sectorial output. Foreign exchange control policies adopted by government and monetary authorities should take international market fluctuations into consideration when determining an ideal exchange rate value. This will go a long way to strengthen the naira and prevent retaliatory effects, it is important that monetary authorities should ensure transparency in determining exchange rate process such that various economic distortions associated with exchange rate should be reduced and managed with caution, as unabated fall in a country's currency can have serious contagious and inimical effects on the economy.

5.3 RECOMMENDATIONS

In light of the above findings, this study therefore recommends thus:

1. Considering the positive relationship between exchange rate and manufacturing sector output in Nigeria, monetary authorities should maintain stability of the exchange rates through proper management so as to encourage local production.

2. Since exchange rate exerts positive effect on the contribution to the agricultural sector, it is thus suggested that the Nigerian government should explores the increased competitiveness of the sector in its economic diversification efforts by sourcing of raw materials locally so that the positive spill-over effects of sourcing for this product will be reduced. In other words, the agricultural sector could provide an avenue to expand the revenue base of the government.

3. Manufacturing industries should improve on the quality of their output this will increase its competitiveness in the global market thereby leading to export promotion strategy should be reviewed and strengthened so as to positively impact industry output level, while import substitution strategy should also be reviewed so as prevent retaliatory attacks from our trading partners.

4. There is need for proper management of exchange rate, to forestall costly distortions, which constitutes an important pillar in enhancing sectorial growth in Nigeria.

5. The government must continue to discourage importation in order to maintain exchange rate stability with zero tolerance on illegal importation.

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