Czech University of Life Sciences Prague

Faculty of Economics and Management

Department of Economics

Master's Thesis

Effect of Monetary Policy on Foreign Trades in Nigeria.

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CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Modinat Gbemisola Adesope

Economics and Management

Thesis Title

Effect of Monetary Policy on Foreign Trades in Nigeria

Objectives of thesis

The main objective of the study is to study the effect of monetary policy on foreign trade in Nigeria Economy and how it affects economic development.
The specific objective of the study is to:

i. To examine the effect of money supply on finance of foreign trade in Nigeria
ii. To examine the effect of trade openness on foreign trade in Nigeria.
iii. To examine the effect of foreign direct investment on foreign trade in Nigeria.

Methodology

The study shall adopt an ex-post facto research design. Ex post facto research design entails an organized and empirical enquiry that enables determination of the existence of a particular phenomenon which has already occurred or cannot be manipulated. The choice of the design is necessitated by the fact that it ensures minimal interference by the researcher thus prevents biasness. To do this, secondary data sources including the Central Bank of Nigeria and Nigeria Bureau of Sta s cs websites shall be explored to obtain important data regarding the variables to be used in testing the stated hypotheses and to achieve the objectives of the study.

The researcher intends to use the Statistical Package for Social Sciences (SPSS) version 26.0. for in-depth analysis. The multiple regression analysis will be used to examine the effects of the independent variables on the dependent variable. The regression model will be a multiple regression model.

To examine the effect of monetary policies on financial trade, the study shall adopt money supply, trade openness and foreign direct investment as independent variables. The choice of these variables was necessitated by the fact that they are major monetary policy determinants. Hence, these independent variables are regressed against the dependent variable foreign trade

The proposed extent of the thesis

60 – 90 pages

Keywords

Monetary Policy, Money Supply, Economic Growth, Interest Rate, Foreign Direct Investment, Trade openness, Exchange Rate, Financial Trade

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Declaration

I declare that I have worked on my master's thesis titled "Effect of Monetary Policy on Foreign Trades in Nigeria" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the master's thesis, I declare that the thesis does not break any copyrights.

In Prague on 31st March, 2023 _____

Adesope Modinat Gbemisola

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Effect of Monetary Policy on Foreign Trades in Nigeria.

Abstract

This study examines the effect of monetary policies on foreign trade in Nigeria. It sets out to investigate whether trade openness, money supply and foreign direct investment have significant effects on of foreign trade. The study adopted the Nigerian economy as a case study and examined data on all chosen variables between the year 1970 and 2020. Due to the flow nature of the data used, a time series analysis was necessary, and the data gathered was analysed using descriptive and ordinary least square regression analyses. In this study, the variables include money supply, trade openness, and foreign direct investment (FDI) as the independent variables, while trade balance was treated as the dependent variable, proxied for foreign trade. Findings from the study revealed that the independent variables have significant effect on foreign trade in Nigeria except Foreign direct investment. The researcher is of the opinion that the insignificance of Foreign direct investment on trade balance may be due to the import dependence of Nigeria, which may cause foreign investors to bring their inputs for production activities from overseas rather than invest in domestic inputs available in Nigeria. Consequently, the study recommends that there should be effective monetary policy management to achieve the objective of price stability by government. The Nigerian monetary authorities should carry out reforms that would enhance the role of monetary policy tools to mobilize funds for trade purpose.

Vliv měnové politiky na zahraniční obchody v Nigérii.

Abstraktní

Tato studie zkoumá vliv měnové politiky na zahraniční obchod v Nigérii. Cílem je prozkoumat, zda otevřenost obchodu, peněžní zásoba a přímé zahraniční investice mají významný vliv na zahraniční obchod. Studie přijala nigerijskou ekonomiku jako případovou studii a zkoumala údaje o všech vybraných proměnných v letech 1970 až 2020. Vzhledem k tokové povaze použitých dat byla nutná analýza časových řad a shromážděná data byla analyzována pomocí popisných a běžných regresních analýz nejmenších čtverců. V této studii proměnné zahrnují peněžní zásobu, otevřenost obchodu a Přímé Zahraniční Investice (PZI) jako nezávislé proměnné, zatímco obchodní bilance byla považována za závislou proměnnou, proxy pro zahraniční obchod. Zjištění ze studie odhalila, že nezávislé proměnné mají významný vliv na zahraniční obchod v Nigérii kromě přímých zahraničních investic. Výzkumník je toho názoru, že nevýznamnost přímých zahraničních investic na obchodní bilanci může být způsobena dovozní závislostí Nigérie, což může způsobit, že zahraniční investoři přinesou své vstupy pro výrobní činnosti ze zámoří, spíše než investovat do domácích vstupů dostupných v Nigérii. Studie proto doporučuje, aby k dosažení cíle cenové stability ze strany vlády existovalo účinné řízení měnové politiky. Nigerijské měnové orgány by měly provést reformy, které by posílily úlohu nástrojů měnové politiky k mobilizaci finančních prostředků pro obchodní účely.

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1. Introduction

The term "monetary policy" refers to a set of actions intended to control the amount, supply, as well as the cost of money in a market economy in accordance with the intensity of economic activity. It is defined as the art of regulating the circulation and movement of financial resources in a manner that fosters growth and price stability (Ashamu, 2007).

Nigeria has been managing its economy using a variety of macroeconomic strategies over the years, one of which is the use of monetary policy instruments to steer the economy in the right direction. The unique economic structures of developing countries require active macroeconomic policies to stabilize their economies. The monetary policy in this regard is highly important, it not only maintain the internal targets of the economy, but it also monitors the external balance. Because due to being small economies these countries are considered as price takers in the international arena, which leaves them exposed to supply shocks in particular and trade vulnerability in general. Therefore, monetary policy accomplishes two objectives by stabilizing the interest rate and exchange rate, first to sustain output and price levels, then to continue to be competitive in global commerce.

The monetary authorities can direct external balance to the appropriate level by adjusting the exchange rate. If the country experiences the deficit in the trade balance, the devaluation in exchange rates is often followed to mitigate this deficit. Such a relationship is explained by the theoretical understandings of Marshall-Lerner (ML) condition, which states that the devaluation is needed for the long-term gains in the international trade for developing countries. However, the improvement in the trade balance is not readily observable. It requires some adjustments before it shows improvement, these adjustments come initially by worsening of trade balance during currency depreciation. It is due to the fact that initially there are trade contracts that have been fixed over previous exchange rates, which show the delayed response of trade balance towards the improvement, and it is known as J-Curve effects.

According to Frankel and Romer (1999), foreign trade has been recognized as an indicator and catalyst for economic growth. This is so because trade enhances the efficient production of goods and services through allocation of resources to countries that have comparative advantage in their production. Additionally, its effects on an economy go beyond just quantitative growth; they also influence the economy's structure and make it easier for money to move internationally, spurring a sustainable economy.

2. Objectives and Methodology

The main objective of the study is to investigate the effect of monetary policy on foreign trade in Nigeria.

2.1. Objectives

The specific objectives of the study are as follows:

i. To evaluate the effect of money supply on foreign trade in Nigeria.
ii. To determine the effect of trade openness on foreign trade in Nigeria.
iii. To assess the effect of foreign direct investment on foreign trade in Nigeria.

2.2. Research Hypotheses

H_{01}: Money Supply has no significant effect on finance of foreign trade in Nigeria

H_{02}: Trade openness has no significant effect on the finance of foreign trade in Nigeria

H_{03}: Foreign direct investment has no significant effect on finance of foreign trade in Nigeria

2.3 Methodology

In the theoretical part of the thesis, data was sourced from expertise books, articles, and journals, which deal with the topic of monetary policy and its relationship with foreign trade. This part of the thesis explains all the important concepts under the subject matter of monetary policy. Immediately after the introduction, monetary policy is explained, followed by the approaches to monetary policies. After explaining these concepts, the theoretical framework of the study was reviewed. The author then proceeds to discuss the tools of monetary policy, as well as the concept of trade balance, which was proxied for finance of foreign trade in line with the model designed for the study.

Before concluding the chapter, the author revisits the concept of foreign trade, a widely known concept, very key to the concept of globalization. This was discussed taking into consideration its relationship with monetary policies.

To wrap up the chapter, the author reviewed several literatures in the discourse of monetary policy, and it effect on the finance of foreign trade and pinpointed the gaps that were inherent in the previous studies.

The practical part then followed. The practical part of this study adopted an ex-post facto research design. The choice is necessitated by the fact that it ensures minimal interference by the researcher thus prevents biasness. Secondary data sources including the Central Bank of Nigeria and Nigeria Bureau of Statistics websites were explored to obtain important data regarding the variables used in testing the stated and to achieve the study's objectives.

The Ordinary Least Square (OLS) estimation technique was used to analyze the transformed data that were collected from Central Bank of Nigeria publications for various years covering (1970 to 2020). A regression model, as indicated in the earlier section of this study, was developed and analyzed using the OLS method to determine the effect of monetary policy on foreign trade in Nigeria. Statistical Package for Social Sciences (SPSS) version 26 was adopted for in-depth analysis. To investigate the effects of the independent variables on the dependent variable, the ordinary least square regression analysis was used. The regression model was, however, a classical econometric model.

To investigate the effect of monetary policies on foreign trade, the study adopted money supply, trade openness and foreign direct investment as independent variables. The choice of these variables was necessitated by the fact that they are major monetary policy determinants. These independent variables are regressed against the dependent variable, foreign trade, proxied with trade balance.

$TB_{it} = f(MS_{it}, TO_{it}, FDI_{it})$.....*1.1*

$TB_{lt} = \alpha_{it} + \beta_1 MS_{lt} + \beta_2 TO_{lt} + \beta_3 FDI_{lt} + \varepsilon_{it}$ *1.2*

Where TB represents the Trade Balance, a proxy for foreign trade

α= the constant term

MS = Money Supply

TO = Trade Openness

FDI = Foreign Direct Investment

ε = Error Term

Money Supply was determined using the M2 type of money supply according to the Central Bank of Nigeria's definition of money. The author intended to adopt the M3 type of money, however, data for M3 money in circulation was not adequately supplied on the Central Bank official page for certain years and thus, the author chose M2 which was readily available and equally relevant in the conduct of the study.

Trade openness is calculated as the ratio of net export to GDP. That is,

$$\text{Trade Openness} = \frac{\text{Export} - \text{Import}}{\text{GDP}}$$

Gross Domestic Product, the monetary value of all final goods and services produced in an economy within a given period, usually a year, was measured at real GDP, that is, taking into consideration the effect of inflation. Gross Domestic Product for this study was valued at a base price in line with data available on the Central Bank of Nigeria's official website. Given the fact that economic variables are being observed over time, it is important that the variables be tested for any signs of stationarity. Hence, the variables were transformed, and the following model was arrived at to find the relationship between the variables.

The data transformation model is presented mathematically as:

$$RLNGTB = f(RLNMS, RLNLTO, RLNFDI)$$

$$\Delta ARLNTB = \alpha 0 + \alpha 1 \Delta ARLNMS + \alpha 2 \Delta ARLNTO + \alpha 3 \Delta ARLNFDI + \varepsilon t \ldots\ldots (1.3)$$

$$\Delta ARLNTB_{t+1} = \alpha 0 + \alpha 1 \Delta ARLNMS_{t+1} + \alpha 2 \Delta ARLNTO_{t+1} + \alpha 3 \Delta ARLNFDI_{t+1} + \varepsilon \ldots\ldots (1.4)$$

Where TB represents the trade balance, a proxy for foreign trade.

Δ= the constant term

Ms = money supply

To = Trade openness

ε = Error term

2.3.1. Data Source

For this study, a secondary data source was explored purely. These included data that have been collected by other people for other purposes, but which are still usable in this type of research study. The annual time series data of trade balance, money supply, trade openness, and foreign direct investment over the period of 1970–2020 have been extracted from the publication of the Central Bank of Nigeria (CBN, 2022).

3. Literature Review

3.1. Introduction

Review of related literature is the process of exploring the existing literature to ascertain what has been written or otherwise published on the chosen research topic, the previous research conducted and their impact on the present topic chosen.

This chapter of the thesis deals with the review of prior literatures relevant to the study. Both past and present studies that are related to this work were reviewed extensively. However, the chapter is further subdivided into the following: conceptual review of subject matters related to the topic of study, theoretical framework, and empirical review of literature.

3.2. Review of Concepts

This section discusses the key concepts that form the background of the study. It demonstrates the researcher's knowledge and understanding of the research topic and provides a clear rationale for the research design and methodology.

3.2.1 Monetary Policy

Monetary Policy is one of the macroeconomic instruments with which nations (Nigeria inclusive) manage their economies with variations from every sector of the economy. It entails those activities instituted by the Central Bank of Nigeria which focus on influencing the cost and availability of credit facilities. It covers a range of measures or combinations of packages intended to manage or regulate the volume, prices, as well as the direction of money in the economy.

Monetary policy is a deliberate action taken by monetary authorities to control the quantity, cost, and ease of access of money credit in order to achieve desired macroeconomic objectives such as internal and external trade balances (Central Bank of Nigeria, 2011). The action is carried out by changing the money supply and/or interest rates with the aim of managing the quantity of money in the economy. Thus, monetary policy has been pursued by nations as a method of economic management to promote sustainable economic growth and development, and formal articulation of how money impacts many aspects of society has also been undertaken as championed by the monetary economists. Monetary authorities

are tasked with employing monetary policy to expand their economies because of the expositions of the function of monetary policy in influencing macroeconomic goals including economic development, price stability, equilibrium in the balance of payments, and a host of other goals.

Monetary policy has been used in Nigeria since the Central Bank of Nigeria was charged with formulating and implementing monetary policy by the Central Bank Act of 1958. This role has allowed for the development of an active money market in which treasury bills, a financial instrument used for open market operations and government debt raising, have risen in volume and value, becoming a notable earning asset for investors and a source of market balancing liquidity.

In line with the anticipated level of economic activity, monetary policy is a set of measures used to control the price, supply, and availability of money in an economy (Folawewo & Osinubi, 2006). Ajayi (2014) opined that price stability, preserving the equilibrium of the balance of payments, encouraging employment and production growth, and promoting sustainable development are all goals of monetary policy. The pursuit of price stability inevitably involves the indirect pursuit of other goals, such as economic growth, which is only possible in the presence of price stability and the financial markets' ability to allocate resources efficiently.

Monetary policy aims to keep the money supply at a level that is in accordance with the real income growth target, ensuring non-inflationary growth. Monetary policy impacts economic expansion by influencing aggregate spending. Changes in the money supply and interest rates have an impact on consumer spending and investment decisions.

The Market Control Approach and the Portfolio Control Approach are two categories of approaches used by the monetary authorities to achieve their stated goal. The Market Control Approach is a traditional or indirect method of controlling the money supply that involves manipulating open market operations (OMO) and the discount rate set by the central bank. The Portfolio Control Approach, however, is a direct or unconventional method of financial control. It operates by using the portfolio constants' tools, which include the following: Reserve requirements, Special deposits with the Central Bank, Strict credit regulations, Moral persuasion, and Direct Measures. Nigeria's monetary policy has been strengthened to target lower inflation rates within the structure of sustaining price stability as the single most important goal of monetary policy.

3.2.2 The Implementation of Monetary Policy in Nigeria.

The Central Bank of Nigeria (established in 1959) has been tasked with implementing monetary policy in accordance with the federal government of Nigeria's macroeconomic policy objectives throughout its existence (CBN, 2009b). These objectives, as stated in the Central Bank of Nigeria's various Acts, are broadly defined as the maintenance of internal and external balance. As a result, monetary policy has evolved over time with the goal of achieving price, interest rate, and exchange rate stability, maintaining a viable balance of payments position, and achieving accelerated economic growth (Nnanna, 2001). Nigeria's policy framework has evolved over time in response to changing political regimes and/or international best practices. Currently, the country targets inflation loosely, with plans to transition to a stricter version in the future. The framework for the conduct of monetary policy has been significantly transformed as the country has evolved from a simple traditional economy to a comparatively modern one to accommodate the increasing complexity of the economy.

The minimum rediscount rate (MRR) served as the nominal anchor for the economy's other interest rates, and it fluctuated in response to economic conditions. However, in an effort to ensure effective market rate anchorage, the CBN announced a new framework in December 2006. (CBN, 2009b). The introduction of the monetary policy rate (MPR) as the operating instrument of monetary policy, as well as the withdrawal of the MRR as the anchor rate for the interbank and money market, is a key component of this framework. According to the CBN (2009b), the new framework is intended to achieve efficient liquidity management and encourage interbank trading of funds in the money market, in addition to ensuring interest rate stability.

The Monetary Policy Committee oversees monetary policy at the Central Bank of Nigeria (MPC). This committee must convene no less than four times per year to review economic performance and develop policies to ensure price and exchange rate stability. The institutional framework of monetary policy includes other sub-committees whose main functions, at various levels, are to evaluate and forecast the amount of liquidity in the system for the MPC's consideration. Monetary policy rates are set by the Monetary Policy Committee (MPC).

3.2.3 Monetary Policy Tools

Paper money, also known as fiduciary currency, is issued by the central bank based on an assessment of the need for cash. In order to attain the goals of price stability (or low inflation rate), full employment, and increase in aggregate income, monetary policy directs the Central Bank's money supply. Money serves as a medium of trade, therefore shifts in its demand compared to supply require spending adjustments.

In order to influence the objectives over which it has no control, the Central Bank adjusts some monetary variables it has control over, such as an aggregate of money, an interest rate, or the exchange rate. The Central Bank's monetary policy tools are based on the economy's level of development, particularly in its financial sector. The Central Bank's monetary policy tools are based on the economy's level of development, particularly in its financial sector. The following discussion covers the most popular instruments.

- **Reserve Requirement**

Cash reserve requirement is the portion of total deposit liability which banks are expected to keep as cash with the Central Bank of Nigeria. The performance of banks is their capacity to generate sustainably profitable revenue. Profitability also protects banks from unforeseen losses by strengthening their capital position. Since the global economic crisis, the Central Banks of Nigeria (CBN) have been concerned about ensuring the sustainability of bank performance and macroeconomic stability.

Following the global financial crisis of 2007–2009, domestic financial crises in 2015, and most recently in 2020 brought on by the coronavirus and other macroeconomic instabilities such as inflation, interest rates, and unemployment rate, the volatility of capital inflows into emerging economies like Nigeria has increased significantly. As a result, issues that go beyond changing credit growth and exchange rates appeared to be threatening macroeconomic and financial stability.

The concern of the Nigerian government to increase capital inflows is to maintain a low level of the policy rate to properly regulate domestic currency and avoid extreme appreciation and credit growth. Hence, the cash reserve requirement is suspected to be the most common tool among unusual monetary policy instruments (Montoro & Moreno, 2011).

In Nigeria, the CBN, not market forces, oversees the requirement for cash reserves. Therefore, a rise in the cash reserve requirements for banks could widen the spread between

the rates on total deposits and loans. The domestic sector may find it too expensive to borrow money from banks as the gaps expand due to the rise in interest rates, which would ultimately have an impact on the profitability of banks. Additionally, lending to domestic banks may not be attractive to foreign institutions and investors in the same way. This suggests that, without any extra increase in capital inflows or local currency, a rise in cash reserve requirements could result in a reduction of national credit. Research demonstrates that for economic stability, nations including Turkey, Croatia, Columbia, Russia, Peru, and Brazil have all altered their cash reserve requirements.

Over the years, the Central Bank of Nigeria (CBN) has sporadically changed the cash reserve ratio for Deposit Money Banks (DMBs) in order to maintain the financial stability of the economy and control inflation. Deposit Money Banks may be required by the Central Bank to maintain a portion (or a combination) of their deposit obligations (reserves) with it in the form of vault cash or deposits. The supply of money is constrained by fractional reserve, which restricts the amount of loans banks may provide to the domestic economy. The underlying premise is that Deposit Money Banks often maintain a steady correlation between the quantity of reserves they retain and the total amount of credit they provide to the public. By changing the reserve base of banks and consequently increasing or decreasing their capacity to create new credit.

- **Open Market Operations**

Open Market Operations ensures that monetary expansion or contraction is carried out.

In order to expand deposit money banks' reserves and, consequently, their capacity to create credit, the Central Bank purchases government securities from them while an expansionary monetary policy is being followed. Similar to this, the Central Bank sells government securities to commercial banks when pursuing a contractionary monetary policy. Their capacity to create credit will be constrained as a result of their reserves declining. The Central Bank purchases or sells securities to the banking and non-banking public on behalf of the Fiscal Authorities (the Treasury) (that is in the open market). Treasury Bills are one of such assets. When the Central Bank sells assets, the number of reserves available to the Deposit Money Banks declines, and when it buys back securities, the amount of reserves available to the Deposit Money Banks increases., altering the supply of money. Lending by the Central Bank: The level of reserves and, consequently, the monetary base are both affected when the Central Bank lends to Deposit Money Banks.

- **Interest Rate**

The minimum rediscount rate (MRR), which the Central Bank uses to determine its lending terms, is offered to deposit money banks that are in good financial standing. The nominal anchor rate that the MRR establishes as the base for the money market's interest rate regime has an impact on the availability of reserves and monetary aggregate as well as the availability of credit and investment (which affects full employment and GDP). A Central Bank may use a few tools to carry out monetary policy, the majority of which depend on determining or influencing interest rates.

The discount and other rates set by the Central Bank will first be absorbed by the financial sector. As the "lender of last resort" in an economy, the Bank can establish the short-term rate floor and ceiling.

The financial system responds to the central bank's decisions on interest rates by changing its own rates in the same way. This is so that Central Banks may continue to support its interest rate example by other means.

A central bank frequently acts as the only source of money for the financial system of an economy. It can therefore influence interest rates by determining how that supply is created. By making predetermined quantities of the supply available at a fixed rate of interest, it can "ration" the supply among the bidders. Alternately, a fixed sum can be auctioned off and distributed to the institutions with the best interest rates. The consequence of purchasing or selling Treasury Bills or bonds, or "open market operations," will be to increase or decrease their price, or "interest rate."

Altering the minimum reserve requirements is another tool that can have a direct impact on the level of liquidity in a financial system and, consequently, interest rates. These are requirements set down by law for banks to maintain a specific level of liquid assets, such as Treasury Bills. By compelling financial institutions to make specific deposits with the central bank, central banks can also reduce the amount of liquidity in a system. When it is essential to "sterilize" money that has been issued to support a currency in the foreign exchange markets, for instance, this approach may be helpful.

- **Direct Credit Control**

The Central Bank has the authority to instruct Deposit Money Banks regarding the maximum percentage or amount of loans (credit ceilings) that may be extended to certain economic sectors or activities, interest rate caps, liquid asset ratios, and the issuance of credit

guarantees for favored loans. Thus, the available savings are distributed, and investments are targeted in certain directions.

- **Moral Suasion**

The Central Bank controls the operation of the banking sector and grants licenses or operating permits to Deposit Money Banks. It can use this advantage to influence banks to do actions they might otherwise not on the basis of their risk/return analysis, such as credit restraint or expansion, enhanced savings mobilization, and the promotion of exports through financial support.

- **Prudential Guidelines**

The Deposit Money Banks may be required to take extra care in their operations by the Central Bank in writing in order to achieve certain goals. A key component of prudential standards is the replacement of certain bank management discretion with rules-based decision-making.

- **Exchange Rate**

The monetary base and, thus, the money supply are both impacted by the balance of payments, which can be in deficit or surplus. In order to maintain the exchange rate at levels that do not adversely affect the domestic money supply through the balance of payments and the actual exchange rate, the Central Bank buys and sells foreign currency. Because of its effect on external competitiveness, the real exchange rate has an influence on the current account balance when it is out of alignment.

The exchange rate has a big impact on how well a country's trade performs. Global trade, the balance of payments, and currency volatility are frequently significantly impacted by relative currency valuations and their volatility, whether affected by exogenous shocks or policy and overall economic performance. There are more regulatory measures that could be trade barriers when international trade activity rise. The fluctuation of exchange rates, which impacts trading activity both directly and indirectly, is a significant barrier to international trade. Currency exchange rate volatility can have an impact on both trade agreements and a nation's trade balance.

One drawback of exchange rate volatility is that monetary policy changes can have a major long-term impact on trade operations. Import levels alter over time, whereas effects on

export levels are typically immediate. As foreign trades activities are increased, there are more regulative practices which might be barriers to trade.

While impacts on export levels are usually immediate, import levels change in the long run. Nowadays international trade is influenced by many factors, such as tariffs and different trade policies and actions set by governmental authorities to stimulate national investments and trades. Economic unions such as European Union are made to better improve international trade by liberating capital flow between countries and reducing restrictions and taxations. However, exchange rate of capital has also a significant effect on this matter. Exchange rate is strongly correlated with competing financial markets and therefore with international trade. It can have negative and positive effects, but it is crucial to create circumstances that sustain this competitiveness (Toderascu & Firtescu, 2018).

Existence of foreign exchange control system in a country is crucial for trade activity modeling.

However, such a control could also prove to be a trade barrier. It can be a non-tariff barrier through leading to artificial currency fluctuations. In addition to the measures that are related to the flow of goods, policies on the currency which are required for the import of foreign goods may be implemented. Governments, for instance, want to protect their exports or domestic production from external competition can keep their exchange rates artificially high. Moreover, they can devaluate local currency artificially. Accordingly, foreign goods in the domestic market will be more expensive and domestic goods will appear cheaper in the foreign market.

Economic theory suggests that an economy's openness to international trade reduces the ability of monetary policy to affect output (Karras, 2001). Additionally, it implies that monetary union membership can boost net gains for an economy. The potency of monetary policy is depending on to what extent an economy is open for foreign trades. In open economies, the effect of money on output is supposedly weaker. Considering the effects of a specific monetary expansion in two different economies: one that is open to foreign trades, and one that is relatively closed, the outcomes will be different. Even if in both economies the aggregate demand is similar, the aggregate supply will not be.

The wage demand will increase as a result of the anticipated subsequent devaluation in an open economy, and the effects of the monetary expansion will be seen more in prices than in output. The opposite outcome will occur when compared to the other economy. Money in circulation affects how central banks act. The income gap and interest rate risk of the

banks' exposures impact how monetary policy is transmitted to bank lending. Such cash flow exposures compel central banks to act in a more forceful and open manner (Gomez, Landier, Sraer, and Thesmar, 2021). Prudential rules and moral persuasion are direct supervision or quality control tools. The fact that they have numerical benchmarks makes the others quantitative instruments.

3.2.3. Trade Balance

The balance of trade is also known as commercial balance or net exports and symbolized as NX. It is the difference in monetary value between a country's exports and imports over a specific time period. The difference can be made between for goods and services of balance of trade. The measurement among the flow of exports and imports for a given period of time of a nation can also be termed as balance of trade. The concept of trade balance does not imply that exports and imports are "balanced" with one another. When a country's exports are worth more than its imports, it indicates a trade surplus or positive balance of trade; conversely, when imports are worth more than exports, it indicates a trade deficit or negative balance of trade for that specific nation.

The ongoing deficit in the trade balance is one of the traits shared by developing nations. Agriculture-based exports and completed industrial goods imports are typically characteristics of developing nations. As opposed to agricultural goods, it is commonly known that industrial items are more valuable. Due to this, these nations' import costs are higher than their export earnings, which causes a trade deficit. The ongoing deficit in the trade balance is one of the traits shared by developing nations.

There exist many reasons behind a deficit in trade balance, the study however, points out that one of the main reasons is an increase in national income (Jhingan, 2006). Majeed and Shah (2014) believes that an increase in national income leads to increase in purchasing power of the consumers ultimately leading to increase in the volume of imports, thus resulting in a deficit in trade balance. This is the case with developed economies also (Kim, 1996; Christensen, 2012; and Bardakas, 2013).

However, some countries, who have used the national income to increase exports, are able to channel the national income into improving their trade balance. This is possible, however, because higher income incentivizes domestic production to measure up (Duasa, 2007; Ng *et al.*, 2008; Hailu, 2010; Kipkosgei, 2011; Christensen, 2012; Gzaw, 2015).

It is equally crucial to discuss this, given the effect of trade balance on national economic growth. Therefore, the following concepts—money supply, trade openness, and foreign direct investment—shall be considered in connection to trade balance from the model constructed by the researcher to explore the impact of monetary policy on the financing of foreign trade.

3.2.4. Money Supply

The total amount of money in circulation at a given time is the money supply in an economy. It can include cash and its substitutes, such as bills of exchange, coins, and bank deposits. It is an important idea that has a big impact on a nation's finances and economy. Inflation and consumption are intimately correlated with the amount of money in circulation. As a result, the government, in particular the central bank of a nation, regulates the flow of money through its monetary policies.

The government continuously monitors and controls the availability of money, which is a crucial economic parameter. They regularly measure the quantity of money as a result to keep it under control. M1, M2, M3, and M4 are the commonly used measurements of the money supply.

M0, or the monetary base, is the starting point for measuring the money supply. It refers to the amount of currency in circulation, which includes currency bills, coins, and bank reserves..

- M1 Money Supply: Also known as the narrow money, it consists of M0 and other extremely liquid bank deposits.
- M2 Money Supply: The most often used indicator because it includes M1, marketable securities, and less liquid deposits in addition to M1.
- M3 Money supply: M2 and money market funds, such as mutual funds, repurchase agreements, commercial papers, etc., make up the M3 money supply, also referred to as "wide money."
- M4 Money supply: M3 and all other least liquid assets, which are typically held outside of commercial banks, make up the M4 money supply. As a result, the various types of money supply measurements mentioned above can be summarized as follows:

  M0= Currency notes + coins + bank reserves

  M1= M0 + demand deposits

M2= M1 + marketable securities + other less liquid bank deposits

M3= M2 + money market fundsM3= M2 + money market funds

M4= M4 + least liquid assets.

These money supply measures typically differ by country. The US Federal Reserve, for example, usually focuses on M1 and M2 types to oversee the US money supply, whereas the Bank of England however still measures M4 types.

The Bank of Japan describes money aggregates as follows:

- M1: cash currency in circulation, plus deposit money.
- M2 + CDs: M1 plus quasi-money and CDs.
- M3 + CDs: M2 + CDs plus deposits of post offices; other savings and deposits with financial institutions; and money trusts.
- Broadly defined Liquidity: M3 and CDs, as well as money market, non-money trusts, investment trusts, bank debentures, commercial paper issued by financial institutions, repurchase agreements and securities lending with cash collateral, government bonds, and foreign bonds.

The United Kingdom

There are only two recognized measures in the UK. The "wide monetary base" or "narrow money" is referred to as M0, while the "broad money" or "the money supply" is referred to as M4.

- M0: Money in circulation (notes and coins) plus the Bank of England's reserve balance for the banks.
- M4: Cash outside of banks (that is, cash that is in use by businesses that are not banks) along with retail bank and building society deposits, as well as wholesale bank and financial institution deposits and certificates of deposit.

The various money stores are considered by many definitions of the money supply. M4 is the least liquid unit of measurement because of the characteristics of bank deposits, particularly time-limited savings account deposits. The most liquid indicator of the money supply is M0, in comparison.

Eurozone

The European Central Bank defines eurozone monetary aggregates as follows:

- M1: circulating currency plus overnight deposits.

- M2: M1 plus deposits with an agreed maturity of a maximum of two years plus deposits redeemable with three months' notice.
- M3: M2 plus repurchase agreements, money market fund (MMF) shares/units, and debt securities with maturities of up to two years.

Australia

According to the Reserve Bank of Australia, the monetary aggregates are:

- M1: The sum of current bank deposits from the private non-bank sector and the money in circulation
- M3: M1 less interbank deposits, as well as all other private non-bank bank deposits and bank certificates of deposit
- Broad money: M3 plus NBFI borrowings from the private sector, less the latter's cash and bank deposit holdings
- Money base: notes and coins held by the private sector, along with bank deposits at the Reserve Bank of Australia (RBA) and other RBA obligations owed to the private non-bank sector.

In contrast to Keynesians, who contend that the money supply has no effect on economic growth, monetarists hold that the money supply is a tool that boosts economic growth based on an unanticipated increase in the money stock. The main factor influencing economic growth is the money supply, which suggests that as money supply increases, people's demands increase, industries produce more, and new employment opportunities increase. The amount of money in circulation is viewed by monetarists as having a greater impact on the economy than any other factor. Additionally, they promote the idea that monetary policies are more effective than fiscal ones, which involve taxes, spending, and debt. They support monetary policy because they recognize that central banks have an important role in setting the amount of money in an economy, which gives them greater sway than the government (Kimberly*,* 2018*).*

The monetary sector and the real economic sector are closely related. The consequence is that because central banks have control over monetary policy tools like the money supply, they may have a significant impact on economic growth rates. If a result, as a country's money supply grows, so will its economic activity, and vice versa.

The monetarist theory formula as postulated by Irvin Fisher is:

$$MV = PQ$$

Where:

M = Money Supply

V = Velocity (number of times an average amount is spent per year)

P = Price of goods and services

Q = Quantity of goods and services

3.2.5. Trade Openness

Another factor that is acknowledged to be important in the discussion of international commerce and economic expansion is trade openness. Trade openness, which is determined by adding up a nation's exports and imports as a percentage of its GDP, reflects the state's participation in global capital and trade flows. The orientation of a nation's economy in relation to international trade is another definition of trade openness. The actual volume of an economy's reported imports and exports serves as a gauge of how open it is. a measure of how adaptable and accessible the host nation is to foreign investors for global trade.

Several studies find that greater trade integration reduces a country's financial fragility and the likelihood of a currency crisis by increasing both the ability and willingness to service external obligations (International Monetary Fund, 2002). A higher export ratio reduces the possibility of abrupt changes in capital flows since the nation is better equipped to pay its debt that is denominated in foreign currencies. Additionally, commercial openness encourages compliance with external obligations by increasing a nation's susceptibility to punishment from creditors in the event of default. Due to this, there is a tendency for external financial crises to occur less frequently as trade integration increases.

3.2.6. Foreign Direct Investment

Foreign direct investment (FDI) is seen as an important catalyst for enhancing foreign trade and widespread economic growth in developing countries. It is an important vehicle for technology transfer from developed countries to developing countries. Foreign direct investments (FDIs) stimulate domestic investment and facilitate improvements in human capital and institutions in the host countries. Foreign trade is also an instrument of economic growth. It facilitates more efficient production of goods and services by shifting production to countries that have a comparative advantage in producing them.

The build-up of natural capital and the transfer of technology are primarily responsible for the market opening in economic growth. The exporters would compete for overseas markets by utilizing industrial technology and innovation. The FDIs boost the host nation's exporting capacity and boost foreign exchange profits, mainly in developing nations. Additionally, they boost funding for domestic investments, promote employment growth, support technology transfer, and boost overall economic growth (Dritsaki and Stiakakis, 2014).
FDI is a major factor in all nations, but it is especially significant in emerging nations. In fact, it is regarded as the main driver of economic expansion and progress. If foreign investment is made under favourable conditions, it can assist close the gap between the country's capital needs and national savings, increase market access, and raise skill levels in the host economy. It can also support technology transfer and good governance (Abbes, Mostéfa, Seghir, and Zakarya, 2015). The increased productivity of FDI is only maintained, nevertheless, if the host nation possesses a minimum threshold stock of human capital.

3.2.7. Foreign Trade and Economic Growth

Foreign or international trade concerns the study of the causes and consequences of the international exchange of goods and services, and of the international movement of factors of production the exchange of commodities and services among countries is referred to as international trade. Foreign trade has been shown over time to be effective in driving growth and development of a country's resources and performance, particularly in developing countries like Nigeria. Globalization is the driving force behind the efficacy of foreign trade and has enabled nations around the world to interact effectively and efficiently. The economic performance of typical countries like Nigeria today cannot survive in isolation, highlighting the importance of foreign trade, as evidenced by how countries exchange goods and services across borders.

According to Matteis (2004), foreign trade has been the driving force behind the gains in economic growth. It has also been viewed as a constraint to economic growth, particularly in developing countries. This is due to countries' proclivity for overdependence on the foreign market, resulting in increased susceptibility to foreign market volatility. According to Matteis (2004), Nigeria has neglected the industrial sector to the point where even crude oil produced in the country cannot be refined. There is an overdependence on countries with

comparative advantages, which causes problems by reducing the country's economic growth through foreign trade.

Economists have argued in favor of foreign trade because it has allowed countries to become interdependent while also promoting a global economy. Nonetheless, as Rodrik points out, little is said about foreign trade resulting in macroeconomic stability such as inflation and balance of payment crises, which can harm domestic investment and lead to poor or weak economic growth (1992). Furthermore, as a tool for pursuing economic growth, it is a tool that can bring about rapid growth of the economy.

When a group of operations related to cross-border trading between merchants is involved, at least two countries should be represented. Traders engage in economic activities for the profit maximization engendered from differentials among the international economic environment of nations (Adedeji, 2006).

The impact of foreign trade on a country's economy is not limited to the quantitative gains, but also structural changes in the economy and facilitates the international capital flow. The acceleration of a long term sustainable economic growth and development especially, through increase in export as one of the major macroeconomic objectives has been the desired aim of every economy in the world. The realization of this goal, undoubtedly, is not automatic. However, it requires policy guidance which involves manipulation of policy instruments (Atuma and Eze, 2017).

Both monetary and fiscal policies fall under the category of macroeconomic measures that could be employed to achieve the aforementioned goal. Apart from the instruments and implementing authorities, these policies are inseparable. However, monetary policy appears more effective in correcting short term macroeconomic maladjustments due to its frequency in applying and altering policy tools, relative ease of its decision process and sheer nature of the sector which propagates its effect to the real economy.

3.2.8. Monetary Policy and Foreign Trade: The Nexus

An economy needs economic growth because it lowers poverty and improves living conditions. Most governments now prioritize monetary policy's ability to affect economic growth due to its expanding significance. Despite the dearth of consensus among

economists on how monetary policy works and on the magnitude of its effect on the economy, there's a noteworthy strong agreement that it's some measure of effects on the economy (Nkoro, 2005).

A series of measures known as monetary policy are used to control the price, supply, and quantity of money in an economy in accordance with the anticipated level of economic activity (Folawewo and Osinubi, 2006). Ajayi (2014) opined that the objectives of monetary policy include price stability, maintenance of balance of payments equilibrium, promotion of employment and output growth, and sustainable development. The pursuit of price stability inevitably involves the indirect pursuit of other goals, such as economic growth, which is only possible in the presence of price stability and the financial markets' ability to allocate resources efficiently. Monetary policy attempts to keep the money supply at a level consistent with the real income growth target in order to ensure non-inflationary growth.

Through total spending, monetary policy affects economic growth. Changes in the money supply and interest rates have an impact on both investment choices and consumer spending. Thus, changes in monetary policy have an impact on aggregate demand. Price stability, maintaining the equilibrium of the balance of payments, and promoting employment, output growth, and sustainable development are all goals of monetary policy in the majority of economies. These goals are essential for achieving internal and external balance as well as for fostering long-term economic growth. The detrimental impact of price fluctuation, which undercuts the goals, explains the significance of price stability. There is widespread consensus that domestic price swings hinder investments and growth and weaken the usefulness of money as a store of wealth (Ajayi, 2014).

International trade encompasses the inflow (import) and outflow (export) of goods and services in a country (Frederick, 2021). Without international trade, countries would only be able to export goods and services produced on their own soil. Globalization and international trade are closely associated since the process of globalization depends heavily on increased cross-border trade activity. An economy's increased direct engagement in the global market is a result of its globalization, which expands the market.

According to Adam Smith, as quoted in Li, Chen and San (2010) opined that expansion of a country’s market encourages productivity which inevitably leads to economic growth. Maintaining a balance between the inflow and outflow of goods and services in an economy is of utmost importance to the sustainability of its economy. Hence, sound monetary policies play great roles in ensuring this equilibrium. Even though achieving equilibrium in

international trade is virtually impossible, monetary authorities must keep pushing forward to make sure that sound policies are in place to safeguard the economy from absurd fluctuations in trade balance. This is particularly important in light of the recent economic inconsistencies following the COVID-19 outbreak and the steps taken by countries to ensure a stable post-pandemic recovery.

3.3. Theoretical Approaches to Monetary Policies

The Keynesian theory, Monetarist theory of monetary policy and classical theory of international commerce serve as the theoretical underpinnings of this work. These ideas outlined the connection between monetary policy and international commerce in an open economy as well as the underlying precepts that will govern foreign trade in such a system.

3.3.1. The Keynesian Theory of Monetary Policy

Keynes's (1936) monetary analysis is based on the concept of effective demand. According to Keynes, shifts in aggregate demand are the bases for changes in output and employment. Therefore, monetary policy frequently has some noticeable effects on the rate of output growth. Keynes supported the government's involvement in boosting aggregate demand and output through the indirect role of central banks, in contrast to the classical thinkers.

Changes in interest rates, which encourage investment, are one way that monetary policy can impact output and employment. Keynesian economists acknowledge that monetary policy can be helpful in boosting output, but they focused on large fiscal stimulus, which entails an increase in government spending or a decrease in taxes, as monetary policy appears insufficient in facilitating an overall revival of the economy through production and output growth. According to Keynes, the ultimate purpose of monetary expansion is to meet an unfulfilled demand for money (Jahan et al., 2014). This focuses mostly on the fall in interest rates, which improves investors' access to capital and encourages investment.

The Keynesians, on the other hand, hold that changes in the money supply could cause the interest rate to rise or fall. A lower interest rate will influence overall investment and boost overall income and output. This is predicated on the idea that the main factor influencing investment in a market economy is the interest rate. The employment of components like labour and capital during the investment process results in a rise in overall employment.

The money supply is the primary variable influencing the health of the economy, according to the monetarists. They think that increasing the money supply will raise nominal demand,

and that when there is an excess of capacity, output will rise as a result. According to the monetarist viewpoint, a rise in the money supply will cause inflation in the long run without having any impact on investment, employment, or aggregate demand. Different economic policies are adopted by the government and put into practice in the economy to have an impact on economic activity. The government wants to accomplish a goal that is thought to be desirable for the economy by doing this.

3.3.2. The Monetarist view of Monetary Policy

Monetarist is a school of thought led by Milton Friedman. This school of thought is a modern variant of classical macroeconomics. They developed a subtler and relevant version of the quantity theory of money. Like any school of thought, Friedman (1963) emphasized on the supply of money as the key factor affecting the well-being of the economy and as well, accepted the need for an effective monetary policy to stabilize an economy. He also has the notion that, in order to promote steady growth rate, money supply should grow at a fixed rate , instead of being regulated and altered by the monetary authority. Friedman equally argued that since money supply might be demanded for reasons other than anticipated transaction, it can be held in different forms such as money, bonds, equities, physical goods and human capital. Each form of this wealth has a unique characteristics of its own and a different yield. These effects will ultimately increase aggregate money demand and expand output. Monetarists acknowledge that the economy may not always be operating at full employment in terms of real GDP (GDP). Thus, in the short run, when the economy is at full employment, they argue that the quantity theory remains a good benchmark of the link between the supply of money, price level, and the real gross domestic product (GDP). Furthermore, in the long run, expansionary monetary policy only leads to inflation and has no effect on the level of real GDP (GDP).

3.3.3. The classical theory of international trade

The notion of comparative advantage is the foundation of much of the traditional philosophy of international trade. It adamantly contends that the difference in overall advantage in terms of technology, economics, social position, etc., facilitates commerce in a two-country model. He went on to mention yet another crucial element that influences comparative advantage. According to Ricardo, variations in climate and environment frequently lead to variations in comparative advantage, and commerce results from trade. Therefore, both the

environment and the business climate have a significant impact on international trade. If a country's current monetary policies support foreign interests, the business environment may be conducive to foreign commerce. In the framework of a model with two countries, two commodities, and one component of production, Ricardo also discovered that a country will typically the product in which it has a competitive advantage and import the commodity in which it has a comparative disadvantage. Comparable costs can be used to represent the traditional view because they are the antithesis of comparative gain. In its current form, the theory predicts that a country will typically export items with lower comparative costs in autarky and buy goods with higher comparative costs in pre-trade isolation.

3.4. Gaps in Existing Literature

Various studies exist in the discourse of the effect of monetary policy on the performance of developing countries with respect to foreign trade relations. A review of these related studies is presented below.

Onuchuku et al. (2018) examined the effect of monetary policy variables on economic growth and balance of payment in Nigeria using Ordinary Least Squares (OLS) method. Results from the study showed that money supply has positive impacts on the growth of gross domestic product (GDP) and balance of payment while money supply has negative impact on inflation in the economy.

Chipote and Makhetha-Kosi (2014) in their study adopted the error correction model to examine the impact of monetary policy on economic growth in South Africa. Findings from their study revealed that money supply and exchange rate have insignificant impact on economic growth in South Africa. However, money supply has significant impact on inflation.

In the works of Eze and Atuma (2017), evaluating the effect of monetary policy variables on net export of Nigeria for the period 1981-2016, the study adopted the Auto Regressive Distributed Lag (ARDL) bounds co-integration test and its associated ARDL short-run and long run coefficients test as well as the Pairwise Granger causality test. The results from the observation showed that money supply has positive insignificant effect on net export of Nigeria while total export has positive significant effect on net export of Nigeria. Similarly, the results showed that interest rate, exchange rate, foreign direct investment and total

import have negative insignificant effect on net export of Nigeria. Results of the Pairwise Granger causality test indicated that money supply has unidirectional relationship with net export with significant causality runs from money supply to net export. The results however, indicated no significant causality between Net export and Interest rate, Exchange rate, foreign direct investment, Total export and Total import. Thus, indicating that any economic policy that aims at increasing money supply and promoting the total export of goods and services will lead to increase in net export of Nigeria while any move by the government to increase interest rate, exchange rate, foreign direct investment and import of goods and services will slow down the growth rate of Nigeria's net export.

Lawal (2016), in his study of the effect of monetary policy operations on the performance of the manufacturing sector in Nigeria from 1980-2015, employed the Ordinary Least Square (OLS) method to estimate the relationship between the variables in the model. The study applied the Error Correction Model (ECM) to ascertain the short-run dynamics of coefficients of the variables included in the model and the speed of adjustment. Findings showed that there exists a positive and significant relationship between broad money supply and output in the manufacturing sector in both short run and long run. Exchange rate, however, exerted significant positive effect on output in the manufacturing sector in the long run, but its effect in the short run is negative. Lawal (2016) study concluded that broad money supply is the largest driver of output in the Nigeria Manufacturing sector. The study, therefore, recommended that the Central Bank of Nigeria (CBN) provide a policy thrust and requisite checks on the activities of deposit money banks to promote compliance in the provision of credit to the private sector in order to boost activities in the Nigeria manufacturing sector.

Usman and Adejare (2014) examined the impact of monetary policy on industrial growth in the Nigerian economy. The study adopted secondary data obtained from central bank of Nigeria statistical bulletin covering the period of 1970 to 2010 and was analyzed using Multiple regression analysis. Variables tested included manufacturing output, Treasury Bills, Deposit and lending and Rediscount Rate. All variables tested were found to have significant effects on industrial Growth. Following the results from the analysis conducted, the study concludes that rediscount rate and deposit have significant positive effects on industrial output, but Treasury Bills have negative impact on industrial output. The study goes on to recommend that the government should develop the industrial sectors of the

economy through its capital expenditure on productive activities and social overheads as they will contribute positively to industrial growth which will invariably boost economic growth.

Nenbee and Madume (2011) examined the impact of monetary policy on Nigeria's macroeconomic stability between 1970 and 2009. Adopting Cointegration and Error Correction Modeling (ECM), just as Lawal (2016) did, the study analyzed macroeconomic stability in terms of price stability. The study revealed that only 47% of the total variations in the model analyzed are caused by the monetary policy variables Money Supply, Minimum Rediscount Rate, and Treasury Bills at the long run. The study further revealed that monetary policy tools showed mixed results in terms of their impact on inflation rate. The study, however, recommended that Nigeria should adopt macroeconomic mix of monetary, fiscal and exchange rate policies in managing inflation to promote price stability and ultimately macroeconomic stability.

Udude (2014) in his study of the impact of monetary policy instruments on economic growth in Nigeria for the period 1981-2012 using Vector Error Correction Mechanism (VECM) discovered that only exchange rate exerted significant impact on economic growth in Nigeria within the period studied.

Ajisafe and Folorunso (2002), also examined the relative effectiveness of monetary and fiscal policy on economic growth in Nigeria using cointegration and its associated error correction model (ECM) techniques from 1970 to 1998. Results from the study showed that monetary rather than fiscal policy had a greater impact on economic growth in Nigeria. Based on this fact, the study concluded that emphasis on fiscal action by the government has led to greater distortion in the Nigerian economy.

Nwoko *et al.*, (2016) investigated the influence of monetary policy measures in Nigerian economy using the ordinary least square regression method. The study showed that average price and labour force have significant influences on gross domestic product (GDP) while money supply has insignificant influence on the growth of the economy.

Ogar et al. (2014), in their study, sought to investigate the influence of fiscal and monetary policy tools on the growth of Nigerian economy for the period of 1986-2010. Adopting the ordinary least squares (OLS) method in the data analysis, the results showed that

government revenue has significant and positive impact on economic growth. The study further revealed that money supply and exchange rate have significant positive impacts on economic growth and the performance of the Nigerian economy.

Imoisi et al. (2013) examined the effect of monetary policies on the stability of Nigeria's balance of payment for the period from 1980 to 2010. The study employed the method of OLS in the analysis and discovered that interest rate and money supply have significant and positive impact on the position of balance of payments in Nigeria during the period examined.

Most studies empirically analyzed sought to determine the relationship between monetary policy and economic growth in Nigeria. However, few took a sectorial look in analyzing and determining the impact of monetary policies on the channels of foreign trade that contribute significantly to economic growth. Furthermore, most studies examined did not cover a longer period, thus inadequately accounting for various shocks and causal effects that could manifest from changes in one monetary policy affecting another. Hence, this study aims to adopt a more dynamic model that shows both the short run and long run relationship between monetary policy and foreign trade in Nigeria.

4. Practical Part

This study adopted a longitudinal research design to understand the changes in the relationship between monetary policy and foreign trade in Nigeria over time. The choice is necessitated by the fact that it allows the study to examine the performance of the variables across different periods and over a long period of time.

4.1. Model Specification

According to Koutsoyiannis (2003), model specification involves the determination of the dependent and explanatory variables which will be included in the model, the theoretical expectations about the sign and the size of the parameters of the function.

The study has adopted a classic econometric model in investigating the effect of monetary policy on foreign trade in Nigeria as specified below:

$$TB_{lt} = \alpha_{it} + \beta_1 MS_{lt} + \beta_2 TO_{lt} + \beta_3 FDI_{lt} + \varepsilon_{it} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \textit{1.2}$$

Where TB represents the Trade Balance, a proxy for foreign trade

α= the constant term

MS = Money Supply

TO = Trade Openness

FDI = Foreign Direct Investment

ε = Error Term

Money Supply was determined using the M2 type of money supply according to the Central Bank of Nigeria's definition of money. The author intended to adopt the M3 type of money, however, data for M3 money in circulation was not adequately supplied on the Central Bank official website for certain years and thus, the author chose M2 which was readily available and equally relevant in the conduct of the study.

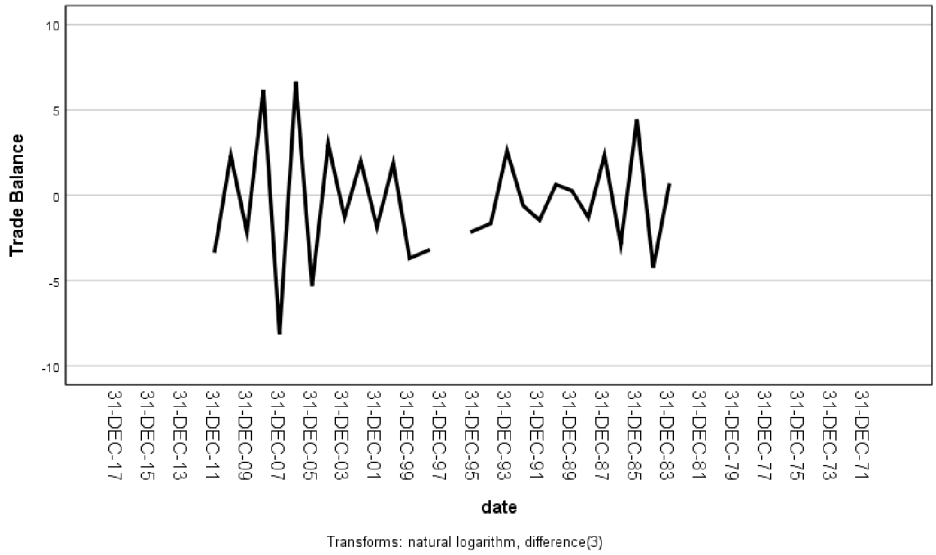
Trade openness is calculated as the ratio of net export to GDP. That is,

$$\text{Trade Openness} = \frac{\text{Export} - \text{Import}}{\text{GDP}}$$

Gross Domestic Product, the monetary value of all final goods and services produced in an economy within a given period, usually a year, was measured at real GDP, that is, taking into consideration the effect of inflation. Gross Domestic Product for this study was valued at a base price in line with data available on the Central Bank of Nigeria's official website.

To determine the long-run relationship between the stated variables, it becomes imperative to test for possible stationarity of the variables, hence, the data available are transformed into their natural logarithmic form.

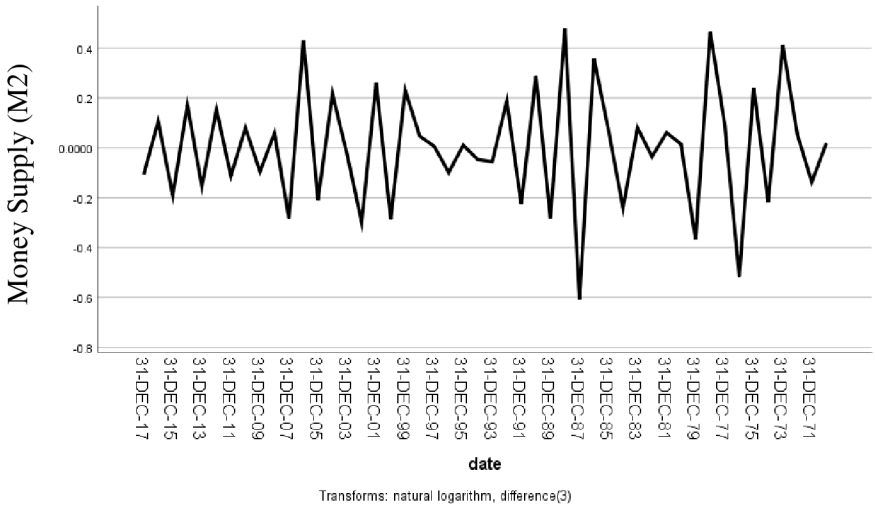
Figure 4.1 Time Series Plot of Trade Balance in Nigeria from 1970 – 2020



Source: Own Computation from SPSS (2023)
Data from the Central Bank of Nigeria (2022)

Figure 4.1 shows the result of the time series plot to determine the stationarity of the data of trade balance in Nigeria over the period of 1970 to 2020. The zig-zag pattern shown on the plot indicates that the data is affected by economic or business cycles, where the economy goes through periods of expansion and contraction. The pattern of the plot further showed that there exists no trend or seasonality in the behaviour of the data and hence the data is deemed to be predictable and stable enough for use in forecasting future values of the time series.

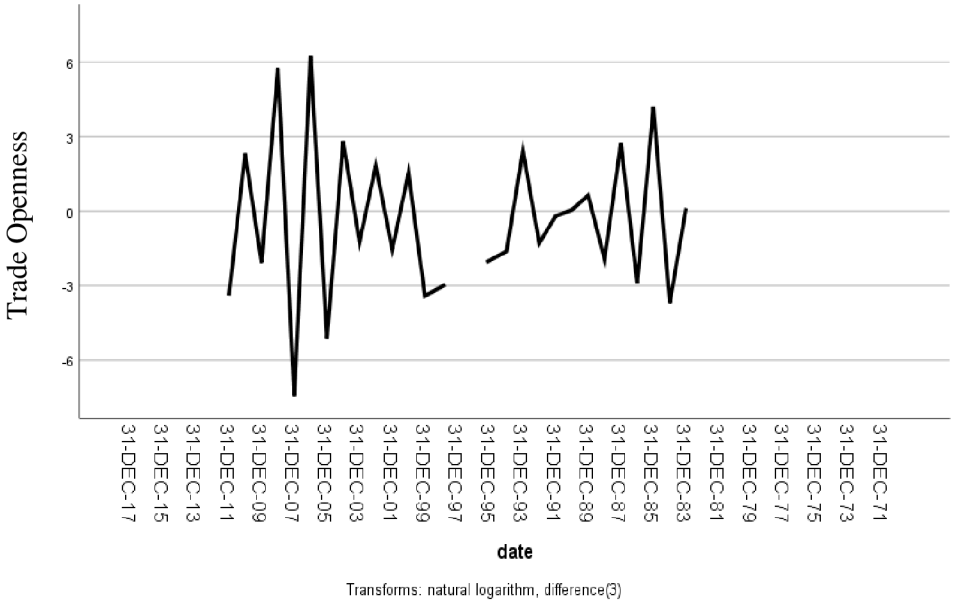
Figure 4.2 Time Series Plot of Broad Money Supply (M2) in Nigeria from 1970 - 2020



Source: Own Computation from SPSS (2023)
Data from the Central Bank of Nigeria (2022)

Figure 4.2 displays the result of the time series plot to determine the stationarity of the data of Money Supply, in this case broad money (M2), in Nigeria over the period of 1970 to 2020. The zig-zag pattern shown on the plot indicates that the data is affected by economic or business cycles, where the economy goes through periods of expansion and contraction. The pattern of the plot further showed that there exists no trend or seasonality in the behaviour of the data and hence the data is deemed to be predictable and stable enough for use in forecasting future values of the time series. Also, the result showed that there are no outliers in the data plotted on the diagram.

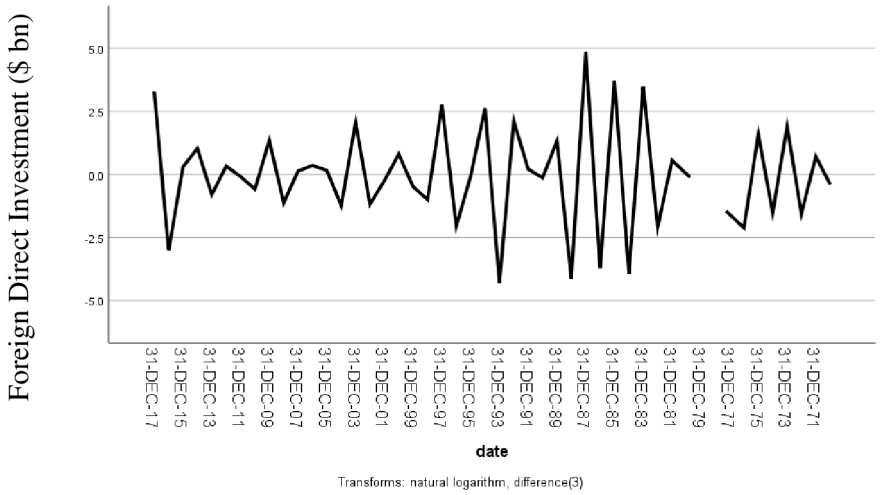
Figure 4.3 Time Series Plot of Trade Openness in Nigeria from 1970 - 2020



Source: Own Computation from SPSS (2023)
Data from the Central Bank of Nigeria (2022)

Figure 4.3 displays the result of the time series plot to determine the stationarity of the data for trade openness in Nigeria over the period of 1970 to 2020. The pattern observed is the same as observed with the plot from trade balance The pattern of the plot showed a zig-zag pattern indicating that the data is affected by business cycles and that there exists no trend or seasonality in the behaviour of the data. Hence, the data is deemed to be predictable and stable enough for use in forecasting future values of the time series. Also, the result showed that there are no outliers in the data plotted on the diagram.

Figure 4.4 Time Series Plot of Foreign Direct Investment in Nigeria from 1970 - 2020



Source: Own Computation from SPSS (2023)
Data from the Central Bank of Nigeria (2022)

Figure 4.4 displays the result of the time series plot to determine the stationarity of the data for foreign direct investment in Nigeria over the period of 1970 to 2020. The pattern observed is the same as observed with the plot from trade balance The pattern of the plot showed a zig-zag pattern indicating that the data is affected by business cycles and that there exists no trend or seasonality in the behaviour of the data. Hence, the data is deemed to be predictable and stable enough for use in forecasting future values of the time series. Also, the result showed that there are no outliers in the data plotted on the diagram.

To arrive at the current state of the data, the variables were expressed in their natural logarithm form and as such, this resulted in the short run error correction model indicated in the below, transforming the initial estimation model 1.2 into estimation model 1.4.

The data transformation model is presented mathematically as:

$$RLNGTB = f(RLNMS, RLNLTO, RLNFDI)$$

$$\Delta ARLNTB = \alpha 0 + \alpha 1 \Delta ARLNMS + \alpha 2 \Delta ARLNTO + \alpha 3 \Delta ARLNFDI + \varepsilon t \ldots\ldots (1.3)$$

$$\Delta ARLNTB_{t+1} = \alpha 0 + \alpha 1 \Delta ARLNMS_{t+1} + \alpha 2 \Delta ARLNTO_{t+1} + \alpha 3 \Delta ARLNFDI_{t+1} + \varepsilon \ldots\ldots (1.4)$$

Generally, an increase in the money supply can lead to inflation, which in turn can affect the trade balance. If inflation is higher in one country than in its trading partners, its exports will become relatively more expensive, while imports will become relatively cheaper. This can lead to a decrease in exports and an increase in imports, leading to a widening trade deficit. Nigeria is characterized as an import dependent country. Trade with the US and China has witnessed a drastic rise, which the researcher believes to be the cause for an unstable exchange rate between the Naira and the US Dollar, which ultimately causes a strain on the economy.

More so, a more open trade policy can increase the volume of trade between countries, which can affect the trade balance. If a country opens its markets to more imports, it can lead to an increase in imports and a decrease in exports, which can widen the trade deficit. However, a more open trade policy can also lead to an increase in exports as domestic producers are able to sell their goods to a larger market.

Foreign Direct Investment (FDI) can have both positive and negative effects on the trade balance. On the one hand, FDI can lead to an increase in exports as foreign investors bring in new technology, knowledge, and capital, which can make domestic producers more competitive. On the other hand, FDI can also lead to an increase in imports, as foreign investors bring in inputs or finished goods from their home countries. This can widen the trade deficit.

4.2 Data Presentation

The data presented below shows the variables used to measure foreign trade that is trade balance as well as the independent variables: money supply, foreign direct investment, and trade openness for a study period of fifty-one (51) years (1970-2020).

Table 4.1. Data Presentation of Variables From 1970 - 1990

Year	Dependent Variable	Independent Variables		
	Trade Balance (US $ billion)	Money Supply (N' million)	Trade Openness (%)	FDI (US $ billion)
1970	-0.352092958	978.2	-2.8064	0.205
1971	-0.256637168	1041.8	-2.7951	0.286
1972	-0.101557286	1214.9	-0.8274	0.305
1973	0.086138614	1522.5	0.5681	0.373
1974	2.636248416	2352.3	10.6101	0.257
1975	-1.248062954	4241.2	-4.4928	0.47012
1976	-2.071954315	5905.1	-5.7065	0.339
1977	0.84667382	7898.8	2.3496	0.440514242
1978	-1.53768997	7985.4	-4.2096	0.210933271
1979	2.719273128	10224.6	5.7539	0.309598869
1980	6.535122222	15100	10.179	-0.738870004
1981	-1.630869138	16161.7	-0.9916	0.542327289
1982	-0.56025484	18093.6	-0.3924	0.430611256
1983	0.992433194	20879.1	1.0221	0.36443458
1984	2.440430315	23370	3.321	0.189164785
1985	2.803570647	26277.6	3.8017	0.485581321
1986	0.746639304	27389.8	1.3623	0.193214908
1987	3.265903598	33667.4	6.2	0.610552091
1988	2.679867748	45446.9	5.3977	0.378667098
1989	7.180829646	47055	16.3189	1.884249739
1990	5.957341406	68662.5	11.0248	0.587882971

Source: Central Bank of Nigeria (2022)

Table 4.2 Data Presentation of Variables for 1991 - 2014

Year	Dependent Variable	Independent Variables		
	Trade Balance (US $ billion)	Money Supply (N' million)	Trade Openness (%)	FDI (US $ billion)
1991	5.634930342	87499.8	11.4721	0.712373362
1992	4.646676355	129085.47	9.7221	0.896641282
1993	1.779839051	165338.75	6.4133	1.345368587
1994	1.366603412	230292.594	4.0393	1.959219858
1995	3.870118076	289091.068	8.7833	0.335842165
1996	2.958142541	345853.963	5.7917	0.499276809
1997	3.17951915	413280.128	5.8385	0.46957702
1998	-1.632894847	488145.787	-2.9904	0.299566658
1999	4.874985178	628952.159	8.2108	1.004915631
2000	16.00858556	878457.275	23.0509	1.140167556
2001	5.049919248	1269321.61	6.8214	1.190618644
2002	6.146919944	1505963.5	6.4443	1.874070753
2003	4.37251733	1952921.19	4.1678	2.005353563
2004	11.74520092	2131818.98	8.6117	1.874060887
2005	15.86695206	2637912.73	9.0085	4.98253393
2006	38.8761686	3797908.98	16.4657	4.854353979
2007	8.642909336	5127400.71	3.1357	6.036021405
2008	35.79202673	8008203.93	10.5433	8.194071895
2009	3.545924039	9411112.245	1.202	8.555990007
2010	28.91821326	11034940.9	8.0005	6.026253091
2011	40.32084671	12172490.3	9.9559	8.841062051
2012	84.54476073	13895166.8	18.5608	7.069908428
2013	25.6938435	15160289.9	5.051	5.562857987
2014	32.71890033	17679286.5	5.9851	4.693828632

Source: Central Bank of Nigeria (2022)

Table 4.3 Data Presentation of Variables for 2015 - 2020

Year	Dependent Variable	Independent Variables		
	Trade Balance (US $ billion)	Money Supply (N' million)	Trade Openness (%)	FDI (US $ billion)
2015	-0.000158812	18901303	0	3.064168904
2016	-9.251511008	21624631.7	-2.2863	3.453258408
2017	-0.016813899	22296786.8	-0.0045	2.412974916
2018	-7.999635328	25079721	-2.0141	0.7752474
2019	-25.014191	27663231	-5.582	2.305099812
2020	Not Available	33314521.3	Not Available	2.385277666

Source: Central Bank of Nigeria (2022)

4.3. Descriptive Statistics

This section contains the estimation of industrial level common sample statistics such as the mean, median, standard deviation, and Jargue-Bera for the specified variables in the first model. The summary of these statistics is presented in table 4.2 below:

Table 4.4: Descriptive Statistics for selected variables

	Trade Balance	**Money Supply**	**Trade Openness**	**Foreign Direct Investment**
Mean	7.328836	5072674.	4.707565	2.018509
Median	2.803571	289091.1	5.051000	0.775247
Maximum	84.54476	33314521	23.05090	8.841062
Minimum	-25.01419	978.2000	-5.706500	-0.738870
Std. Dev.	16.30503	8641431.	6.318981	2.461452
Skewness	2.486883	1.715687	0.565100	1.454780
Kurtosis	11.67006	4.835058	3.231480	4.009499
Jarque-Bera	212.3052	32.17626	2.828239	20.15484
Probability	0.000000	0.000000	0.243140	0.000042
Sum	373.7707	2.59E+08	240.0858	102.9439
Sum Sq. Dev.	13292.70	3.73E+15	1996.476	302.9373
Observations	**51**	**51**	**51**	**51**

Source: Own Computation from SPSS (2023)

Data from the Central Bank of Nigeria (2022)

Table 4.2 reveals that the average trade balance within the period was $7.328836 billion with the maximum trade balance value of $84.54476 billion which was observed in 2012 while the minimum trade balance value $-25.01419 billion was observed in 2019. Similarly, the average Foreign Direct Investment during the period was $2.018509 billion with a maximum Foreign Direct Investment of $8.841062 billion reported in 2011 and a minimum of $-0.738870 billion was reported in 1980.

The average money supply was #5,072,674 million, with a maximum value of #33,314,521 million reported in 2020 while the minimum value of #978.2 million was reported in 1970. The Trade Openness of 4.7% was observed as average while a maximum Trade Openness of 23.05% was reported in 2000. In the same vein, the Jarque-Bera statistics shows that all the selected variables are normally distributed but require further diagnostic test before further analysis.

4.4. Correlation Analysis

The table below presents the results of the correlation analysis conducted to examine the direct relationship among observed variables.

Table 4.5 Correlation Analysis of Variables

		Trade Balance	**Money Supply**	**Trade Openness**	**Foreign Direct Investment**
Pearson Correlation	Trade Balance	1.000	.816	.732	.747
	Money Supply	.816	1.000	.356	.882
	Trade Openness	.732	.356	1.000	.297
	Foreign Direct Investment	.747	.882	.297	1.000
Sig. (1-Tailed)	Trade Balance	.	.000	.000	.000
	Money Supply	.000	.	.018	.000
	Trade Openness	.000	.018	.	.041
	Foreign Direct Investment	.000	.000	.041	.
N	**Trade Balance**	**35**	**35**	**35**	**35**
	Money Supply	**35**	**35**	**35**	**35**
	Trade Openness	**35**	**35**	**35**	**35**
	Foreign Direct Investment	**35**	**35**	**35**	**35**

Source: Own Computation from SPSS (2023)

Data from the Central Bank of Nigeria (2022)

Table 4.5 highlights the relationship among all the variables adopted in the study. A look at the relationship among trade balance, the dependent variable, and Money supply, trade openness, as well as foreign direct investment, the independent variables, show that all the independent variables have strong positive relationships with the dependent variable, trade balance (0.816, 0.732, and 0.747 for money supply, trade openness, and foreign direct investment, respectively). Likewise, the significance levels for all the independent variables were less than 0.05 (0.000 across board for all the independent variables). This indicates that the relationship between these individual variables - money supply, trade openness, and foreign direct investment, are statistically significant and not due to chance.

The relationship among each of the independent variables are also statistically significant indicating that they all have effect on each other directly.

4.5. Test of Hypothesis

To test the stated hypothesis, the ordinary least square regression model was adopted as specified in the study. Additionally, t-test and F-test statistic were employed to test the hypothesis concerning the true values of the individual variables- Money Supply, Trade Openness, and Foreign Direct Investment, in relation to the Trade Balance). The R^2 - Statistics is also used as the coefficient for determination which measure the goodness of fit of the regression fitted model to the observed samples values of the variable while the Durbin Watson test statistic is used to investigate the first order serial autocorrelation and the spurious nature of the regression model estimate.

The results from the analysis are presented below:

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.946[a]	.895	.884	.470453585712987	.498
a. Predictors: (Constant), Foreign Direct Investment, Trade Openness, Money Supply					
b. Dependent Variable: Trade Balance					

Source: Own Computation from SPSS (2023)
Data from the Central Bank of Nigeria (2022)

Table 4.6 above provides information on the overall fit of the regression model, including the R-squared value, the adjusted R-squared value, and the standard error of the estimate, among others. The R-squared of 0.895 indicates that 89.5% of the variation in the dependent variable (trade balance) can be explained by the independent variables (money supply, trade openness, and foreign direct investment) in the model. Moreover, the adjusted R-squared of 0.884 shows that after purging the model for the influence of the number of independent variables in the model, the independent variables still account for 88.4% of variations in the dependent variable. Finally, the standard error of the estimate, 0.4705 which is closer to 0

shows that the model is predictable, and reliance can be placed on the result derived from the analysis.

Table 4.7: Model Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	58.230	3	19.410	87.698	.000[b]
	Residual	6.861	31	.221		
	Total	65.091	34			
a. Dependent Variable: Trade Balance						
b. Predictors: (Constant), Foreign Direct Investment, Trade Openness, Money Supply						

Source: Own Computation from SPSS (2023)

Data from the Central Bank of Nigeria (2022)

Table 4.7 shows the result from the analysis of variance conducted on the variables. The F-value of 87.698 from the analysis show that the 34 degrees of freedom used in the study is relevant owing to the sample size of the data adopted. As such, the F-value is large enough to ensure the reliability of the data used in the study. Also, the significance level 0.000 indicates that the difference between the groups is statistically significant.

Table 4.8: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-6.916	2.260		-3.060	.005		
	Money Supply	.253	.065	.492	3.885	.001	.212	4.707
	Trade Openness	.850	.104	.509	8.147	.000	.872	1.147
	Foreign Direct Investment	.184	.140	.162	1.311	.200	.222	4.510
a. Dependent Variable: Trade Balance								

Source: SPSS Output (2023)

Data from the Central Bank of Nigeria (2022)

Table 4.8 above relates to the model coefficients which provides important information about the relationship between the independent variables and the dependent variable. The table includes the coefficients, standard errors, t-values, and p-values for each independent variable in the model.

Results from the table show that the coefficient for money supply was 0.253 indicating that a 25.3% change in money supply will cause direct change in trade balance in Nigeria. Also, trade openness had a strong positive coefficient of 0.850 indicating a direct relationship between trade openness and trade balance in Nigeria. Foreign direct investment equally had a positive relationship with trade balance. However, a cursory look at the significance level for all the independent variables shows that only money supply and trade openness had significant effect on trade balance in Nigeria with p-values of 0.001 and 0.000 respectively. Foreign direct investment on the other hand had p-value of 0.200 which is greater than 0.05. The overall significance of all the variables when combined however, was 0.000 as shown on Table 4.7.

The VIF results 4.707, 1.147, and 4.510 from Table 4.8, which are less than 5 shows that there are no signs of multicollinearity among the independent variables, and where they may be doubt, the effects are not severe. Hence, just as the results on Table 4.6 had shown, reliance can be placed on the result of the regression analysis.

The estimation model from the result of the regression analysis is provided below:

Model Estimation

$$TB = -6.916 + 0.253(MS) + 0.85(TO) + 0.184(FDI) + 1.163$$

Where the variables remain as previously defined. The above table is the result of the static regression analysis where Trade Balance (TB) was regressed on Money Supply (MS), Trade Openness (TO) and Foreign Direct Investment (FDI). The a-priori expectation of the estimate coefficient is; $\alpha 1 < 0$, $\alpha 2 < 0$, $\alpha 3 < 0$.

5. Results and Discussion

This study has investigated the Effect of monetary policy on foreign trade in Nigeria for a 51-year period of 1970-2020. Prior to testing the hypothesis, the researcher conducted a correlation analysis of the variables adopted by the study and found a positive relationship among the independent variables and the dependent variable. All the independent variables (money supply, trade openness, and foreign direct investment) were statistically significant at 5% level of significance ($p = 0.000$) with positive correlation coefficients (0.816, 0.732, and 0.747) when paired with the dependent variable (trade balance).

Thus, testing the hypothesis at a 5% significance level, the regression result showed that there is an existence of a linear and proportionate relationship between trade balance and the independent variables. The independent variables identified are the monetary policy variables of money supply, trade openness and foreign direct investment. The co-efficient estimates are rightly assigned in the regression results, which indicates a positive relationship with trade balance confirming the researcher's prior expectation.

The short run analysis of the effectiveness of monetary policy on foreign trade in Nigeria as presented in table 4.4 shows that the overall coefficient of determination (R^2) indicates that 89.5 percent of variations in foreign trade in Nigeria within the period is explained by the independent variables in the model. After the influence of the number of independent variables has been purged out as shown by the Adjusted R^2, the dependent variable is still explained by the equation with 88.40 percent. The F-statistics (87.698) of the model estimate is statistically satisfactory such that the hypothesis of the equation being equal to zero can be rejected. The joint influence of the explanatory variables was statistically significant at 5 percent level of significance with p-value of 0.000. Durbin Watson test of autocorrelation (0.498) indicates the presence of positive autocorrelation. Based on these facts, it is safe to conclude that monetary policy has significant effect on foreign trade in Nigeria. Thus, the null hypothesis guiding the conduct of this study is rejected.

In addition, specific observation of the independent variables employed in the study shows that, money supply has significant impact on trade balance in Nigeria (p-value $0.001 < 0.05$). This agrees with the earlier assertion by the researcher that, increase in the money supply can lead to inflation, which in turn can affect the trade balance. If inflation is higher in one

country than in its trading partners, its exports will become relatively more expensive, while imports will become relatively cheaper. This can lead to a decrease in exports and an increase in imports, leading to a widening trade deficit. From the results thus achieved, it can be deduced that money supply encourages investment and productivity in goods and services, thus satisfying objective one (1) of the study. Also, trade openness was observed to a significant positive effect on trade balance in Nigeria over the period observed (p-value $0.000 < 0.05$). The higher the ease of trading with external countries, the higher the foreign trade activities expected in the economy.

Finally, the empirical evidence arising from the study reveals that foreign direct investment had insignificant relation with trade balance, hence, the researcher believes that as investment from external economies soar high in the country, though beneficial, the result is a deficit in the country's trade balance mainly because Nigeria is an import dependent economy. Investors are forced to bring in inputs from their local economy into the country thus leading to increased imports over export. This, therefore, causes distortion in the country's economic growth projection.

From all observations made from the results of the analysis conducted, it is safe to reject the null hypothesis and accept the alternate hypothesis that monetary policy has significant effect on foreign trade in Nigeria. This agrees with the earlier findings of Eze and Atuma (2017), whose study on the effect of monetary policy on net export in Nigeria showed that money supply has positive insignificant effect on net export of Nigeria while total export has positive significant effect on net export of Nigeria. Similarly, the results showed that interest rate, exchange rate, foreign direct investment and total import have negative insignificant effect on net export of Nigeria. Also, the studies of Charles (2012), Lawal (2016), and Daniel, Phillip, James, and Ibrahim (2020) agree with the findings of this study. All the studies equally found that monetary policy has significant effect on economic growth. Daniel, Phillip, James, and Ibrahim (2020) observed that money supply has significant and positive effect on economic growth in the long run but fails to show same effect in the short run. However, the total effect of tools adopted in the study found significant effect on economic growth.

On the other hand, findings from several other studies Diego et al (2018), Miroslav and Ivana (2018), and Jide (2021) among others, do not agree with the result of this study. In

the case of Jide (2021), the study investigated monetary policy and the balance of payments in Nigeria. Findings showed that while monetary policy has a significant effect on the balance of payments in Nigeria, it does not have a significant effect on the country's exports or imports. The study, however, suggests that other factors, such as exchange rate fluctuations and global economic conditions, may have a greater influence on Nigeria's foreign trade. Miroslav and Ivana (2018), in their study of the impact of monetary policy on the trade balance in the Euro area found that the effect of monetary policy on trade balance in the area was weak and goes on to suggest that fiscal policy and structural reforms may be more effective in promoting trade balance in the region rather than adopting monetary policies.

6. Conclusions

Extensive review of literature and researcher's own analysis of various economic variables enlightened the author on the importance of monetary policy on foreign trade in an economy. While there are mixed thoughts from different research in the past, the result from this study shows clearly without doubt that monetary policy has significant effect on foreign trade in Nigeria. However, it is best to understand that in the discourse of economics and economies, there is no one size fits all for all countries and models. Miroslav and Ivana (2018) in their assertion may have arrived at the conclusion that, monetary policy is weak on trade balance, based on the economic situation prevalent in the Euro area as at the period of the study. The same goes for Jide (2018) whose study was on the Nigerian economy. The data as at the said date could be biased given the fact that the period was a post recessionary period for the Nigerian economy and as such monetary policies may have little or no effect on trade balance.

Monetary policy tools are numerous for controlling money supply within an economy. The same goes for fiscal tools which are not discussed within the scope of this study. Money supply, which is the main component of every monetary policy was observed extensively in this study. Looking at the M1, M2, M3, and M4 classifications of money supply allows the researcher to understand vividly what makes up the money in circulation in an economy. Nigeria adopts the M1, M2 and M3 classification. For this study, only the M2 category was adopted due to its availability. The researcher does seek to use the M3 class but the data on the Central Bank of Nigeria's database was incomplete as of the date of extracting the data.

The study concludes from findings of the study as explained in the previous section that, monetary policy impacts positively foreign trade in Nigeria. Money supply, a major monetary policy tool, has significant influence on the level and finance of foreign trade in the country. As the disposable income of citizens increases, the quantity of money in circulation becomes abundant giving rise to more trading. The middle- and high-income classes get enough to cash to go on vacations and health tourism outside the country. The low-income earners are not left behind in the discourse. They equally have more to send on necessities. Increased money supply boosts purchasing power in the short run, however, as more money remains in circulation, the effect is a rise in the prices of goods and services due to too much money chasing few commodities. Just as this works in the domestic

economy, the same is felt in the international space. According to the result of the regression analysis conducted, money supply has a positive relationship with trade balance. An increase in money supply leads to a corresponding increase in trade balance in the economy, and vice versa. Hence, in order to maintain an optimal trade balance in the economy, monetary authorities need to constant monitor the underlying factors affecting money supply in the economy vis a vis exchange rate, inflation rate, interest rate, etc. to ensure that the level of money in circulation is at equilibrium.

Trade openness, which is the level to which an economy eases the trade between itself, and other economies equally has significant influence on the level of foreign trade in Nigeria. Result from the research shows that out of the three explanatory variables, trade openness has the most influence on foreign trade in Nigeria. The researcher believes this to be the result of trade treaties and pacts signed by the Nigerian government with surrounding economies such as the African Continental Free Trade Agreement (AFCFTA). Trade openness creates more opportunities for a country more than just international trade. Immigration and transfer of skilled labour becomes less rigid. Trade openness on its own has direct link with foreign direct investment because foreign investment is only possible when foreigners view the business environment as friendly and business worthy. However, this does not always play out well as seen in the result of the regression analysis conducted. Foreign direct investment shows an insignificant effect on foreign trade in Nigeria. The study deduced that this is so because Nigeria is an import dependent country and as such investments from foreign economies come in the form of inputs used in the production process. This ultimately counts as imports into the economy thereby causing a negative effect on the country's trade balance.

Based on the findings of this study, the study therefore recommends that there should be effective monetary policy management to achieve the objective of price stability by government. The Nigerian monetary authorities should carry out reforms that would enhance the role of monetary policy tools to mobilize funds for trade purpose. Finally, government should ensure political and macroeconomic stability so as encourage investment, both local and foreign and guarantee business survival all the while promoting the development and empowerment of indigenous corporations to boost internal development of inputs used in the production thereby reducing reliance on external inputs.

7. References

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8. List of Pictures, Tables, Graphs and Abbreviations

8.1. List of Tables

8.2. List of Figures