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Impact of Macroeconomic Uncertainty on Economic Growth in Nigeria: 1985-2018

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Abstract. Macroeconomic uncertainty pertains to the inability to predict the future performance of the overall economy. It can be caused by volatile interest rates, unstable unemployment, and unpredictable interest rates. This situation can destabilize an economy which can lead to recession. The paper analyses the effects of macroeconomic variables on the economic performance in Nigeria. Utilizing the Ordinary Least Squares (OLS) method for econometric estimation, the paper considered yearly time series data of 5 variables; Unemployment rate, stocks traded, inflation, interest rates, and Gross Domestic Product, and examined their influence on economic growth. The findings revealed that when the four other variables are regressed against GDP, there is a negative correlation thus discouraging investment and making policy implementation difficult. However, there is a positive, though not statistically significant relationship between between GDP and interest rates when regressed solely against interest rates and stocks traded. In conclusion, the study shows that because of unpredictable economic conditions, policymakers may struggle to effectively implement growth-stimulating measures, potentially leading to economic downturns, reduced productivity, and hindered long-term growth prospects. This paper recommends that the importance of implementing strong and consistent economic policies to reduce uncertainty and promote stable and sustainable economic growth.

Keywords: Stock market, uncertainty, Inflation, OLS, and Economic Growth

1. Introduction

The efficiency of the stock market in carrying out its capital allocation functions determines the overall growth of an economy. Savings are mobilized by the stock market, which also assigns a greater share of them to companies with comparatively better prospects as shown by their rate of return and degree of risk. This function is crucial because it allows capital resources to be directed by supply and demand pressures toward businesses that have comparatively high and rising productivity, which promotes economic growth and expansion (Beliaeva et al., 2020).

Macroeconomic uncertainty and financial stock market indicators are major determinants for developing and developed economies. Financial aspects are an impression of human conduct, alluded to as normal self-intrigue (Keswani, 2021). To this end, macroeconomics investigates the interrelationships of total monetary factors. Each individual tries to achieve a level of fulfillment by expanding products and enterprises or by apportioning assets or time to accomplish fulfillment yet there are restricted assets. Shortage and accessibility of products and ventures within a nation will mirror the level of monetary development. Therefore, high or low financial development can be measured by figuring the gross domestic product (GDP) of the nation concerned. The total national output that is, gross domestic product is a money-related measure of the market estimation of every single great and administration delivered in a period (quarterly or yearly) of time (Aremu, 2020).

Macroeconomic uncertainty is an economic indicator that determines the trajectory of any economy's stability. These macroeconomic uncertainty indicators include the unemployment rate, inflation rate, and interest rate. Unemployment is the state in which a person who is willing to work and able to work cannot find a job. As such, it surges the strength of economic growth through price stability. And on the preceding, inflation is seen as the continuous increase in the general prices of goods and services in a country over a given period, while the interest rate is regarded as the

proportion of a loan that is charged as interest to the borrower, typically expressed as an annual percentage of the loan outstanding. A share price is the price of a single share of several saleable stocks of a company. Stock prices can be defined as the highest amount an individual, firm, or government is willing to pay for the stock or the lowest amount it can be bought for (Caldara et al. 2016; Plakandaras, Gupta, and Wohar 2019)

The body of research demonstrates unequivocally that industrialized nations have investigated their stock market by mobilizing resources to promote economic development and progress (Demorguc-Kunt & Levine, 1996; Fatai & Bankole, 2013; Kavya & Shijin, 2020; Qamruzzaman & Wei, 2018). This is not the case in the Nigerian economy, where the capital market was given less thought and the money market was prioritized. Imoagwu, & Ezeanyeji (2019) and Oboh et al. (2019) examined the impact of global economic policy uncertainties on Nigeria's export earnings and found that such uncertainties negatively affect domestic earnings. This highlights the country's vulnerability to external shocks. Furthermore, it is worthwhile to investigate the connection between stock markets and economic growth given their growing size and liquidity has a connection between uncertainty, macroeconomic variables, and share prices in all economies (Popp & Zhang, 2016). There are two schools of thought: the first maintains that the development of the stock market is crucial for economic progress, while the second does not. Christiano et al. (2014) contend that uncertainty shocks play a crucial role in driving business cycle dynamics. Levine and Zervos (1997) found that the liquidity of the stock market is crucial to economic expansion. However, as noted by Demirgue-Kunt and Levine (1996), higher liquidity can hurt corporate governance as a result of investors' myopia over market liquidity and diminish growth by lowering saving rates due to uncertainty about savings while Chugh (2016) proposed that due to the small and temporary nature of fluctuations in measured volatility, changes in uncertainty have minimal impact. Given these, this study aims to evaluate the evolution of the stock market and economic growth by looking at the long-term link between the variables as the stock market acts as a driving force and catalyst for realizing the vision, thereby aiding in the full diversification of the economy.

1.1 Statement of Problem

Studies on the relationship between economic growth and stock market performance have been very limited in emerging countries, especially Nigeria. Foreign Direct Investment (FDI) is seen as a possible driver for economic growth and development in Nigeria (Ajayi, 2020). The relationship has proved controversial theoretically. For example, prior research has consistently concluded that there is a causal relationship between economic growth and stock market performance. Certain studies argued that the stock market's performance strongly stimulates economic expansion (Alom 2018; Fagbemi, Adeosun & Bello, 2022; Pan & Mishra 2018). Some have argued that the performance of the stock market hinders economic progress (Demirguc-kunt & Levine, 1996; Guru & Yadav, 2019; Nurudeen, 2009). According to Levine (1997), Nigeria's stock market is extremely illiquid and is unable to expand quickly enough to support the country's economic expansion. Nnakee et al. (2024), claimed that although turnover ratio has an unusually strong positive relationship with economic growth, market value traded ratios and market capitalization have a negative relationship with it. These contradictory findings highlight the need for more analysis of the nature of the relationship between economic growth and stock market success, and this study is one of those studies.

Furthermore, earlier research only looked at a single composite metric, which does not provide a very thorough analysis of the stock market's performance. Because of this, their conclusions' applicability to the implementation of policy is severely empirically constrained. This is because the adoption of many distinct metrics for stock market performance may have provided a more comprehensive and lucid image of the potential relationship between stock market performance and economic expansion. As a result, this study differs from previous research on Nigeria's economy in that it has used proper variables based on financial and economic theories. This is because the adoption of many distinct metrics for stock market performance may have provided a more comprehensive and lucid image of the potential relationship between stock market performance and economic expansion. As a result, this study differs from previous research on Nigeria's economy in that it has used proper variables based on financial and economic theories. The primary aim of this paper is to analyze the relationship between the stock market and the economic performance of Nigeria. Specifically, it seeks to explore the connections between stock trading, unemployment, inflation, interest rates, and economic growth in Nigeria to determine the relationship between turnover ratio, all-share index growth, and economic growth and in the same context investigate how the monetary policy rate affects financial deepening growth and thereby evaluate the

impact of stock market performance indicators on financial deepening growth in Nigeria.

2. Literature Review

2.1 Okun's Law

In its most basic form, Okun's law investigates the statistical relationship between a country's unemployment rate and the growth rate of its economy. The economics research arm of the Federal Reserve Bank of St. Louis explains that Okun's law is intended to tell us how much of a country's gross domestic product (GDP) may be lost when the unemployment rate is above its natural rate (Bartolucci et al., 2018). Studying uncertainty is essential due to its impact on economic activities. Various economic agents respond differently to uncertainty, causing periodic fluctuations in the economy. It goes on to explain that the logic behind Okun's law is simple. Output depends on the amount of labor used in the production process, so there is a positive relationship between output and employment. Total employment equals the labor force minus the unemployed, so there is a negative relationship between output and unemployment (conditional on the labor force).

Wogari (2023) studied the presence of an Okun-type relationship in the Nigerian economy from 1991 to 2018. Their findings revealed a long-term inverse relationship between unemployment and output in Nigeria. The Okun coefficient was found to be 1.75 percent, meaning that a one percent decrease in the unemployment rate corresponds to a 1.75 percent increase in GDP. Mellisa (2017) demonstrated Okun's law for France and the United Kingdom inside a bi-variate unobserved component model. The investigation utilized information from OECD for year 1969:1 to 2011:2 for France and from 1971:1 to 2011:2 UK utilizing quarterly information. The after-effects of the study demonstrate a negative relationship between patterns of both series supporting the genuine business cycle hypothesis. A positive correlation between economic growth and FDI was discovered by Emmanuel (2016) when multiple regression estimation methods were used on data from 1981-2015 to analyze the relationship which showed a statistically significant correlation. Ugbaka, Awujola & Bagaiya (2021) studied the relationship between unemployment and inflation in Nigeria using a VAR-Granger causality test and a multivariate regression model with ordinary least squares estimation. The findings from the regression analysis indicated that the unemployment rate had a negative but insignificant effect on the inflation rate.

As opined by Olaniran-Akinyele and Bada, (2020), there exists a rising increment in productivity which affects unemployment emphatically through its commitment to higher yield meaning an expanding interest for demand for labor subsequently diminishing the unemployment rate in light of current circumstances. Samad (2023) assessed Okun's coefficient, and checked the validity of Okun's law in some Asian nations, for this reason, they utilized the time series annual data amid the period 1980-2006. He utilized the Engle-Granger (1987) co-integration method to discover long-run relationships amongst variables and an error correction mechanism (ECM) is utilized for short-run dynamics. After getting observational confirmations, one might say that Okun's law elucidation may not be pertinent and the principle of NAIRU does not hold its validity in some Asian developing nations. Udude and Nnachi (2017) assessed the Okun's coefficient, and checked the legitimacy of Okun's law in Nigeria, using the time series yearly data amid the period 1980-2013. Engle granger co-mix test and Fully Modified OLS were utilized. The experimental confirmations demonstrated that there is a positive coefficient in the Regression, inferring that Okun's law elucidation doesn't apply to Nigeria. It was suggested that administration and policy creators should utilize monetary approaches that are more suited to auxiliary changes and changes in the labor market. At very low inflation rates (less than 2-3 percent) inflation and growth are positively related. Akinsola and Odhiambo (2017) found a negative relationship between economic growth and inflation. Perego and Vermeulen (2016) discovered a negative relationship between inflation and growth in pooled cross-area, time series regression for a huge arrangement of nations. He contended that inflation hinders the efficient allocation of resources by darkening the flagging part of relative price changes, the most critical guide for effective economic decision-making. Inflation has a few indicators such as Consumer Price Index (CPI), Wholesale Price Index (WPI), and Implicit Price Index (deflator GDP). Most of the modern empirical research on interest rates dates from the surge of rates in the early 1980s. While the initial increases were widely attributed to the adoption of a tight monetary policy in the United States, the effects of that policy were expected to be transitory.

Rudd (2022) highlighted the global nature of the interest rate increases, concentrating on six substantial OECD economies. A large portion of their analysis concentrated on short-term rates, considering the absence of measures of expected inflation over extended time skylines required to develop a measure of the long haul genuine security rate. They made a

gauge of the expected inflation rate from the forecast of a simple autoregressive model of actual inflation and examined changes in four essential determinants: the anticipated profitability of investment, saving, monetary policy, and portfolio preferences. They inferred that enhanced benefits and shifts in the mix of fiscal-monetary policy were the essential factors behind the rise in rates. However, Merrill (2020) states that interest rates are charged for various reasons, however, one is to guarantee that the lender brings down his or her presentation to swelling. Inflation causes an ostensible measure of cash in the present to have less acquiring power later on. Expected expansion rates are a vital piece of deciding if a loan fee is sufficiently high for the leaser. The genuine loan cost idea is crucial in the exploration into the common relations of swelling, because expecting that the banks are judicious, expansion and ostensible interest rate impact each other. Lawal and Olusegun (2023) examined how Foreign Direct Investment (FDI) influences economic growth in Nigeria through a dynamic panel data analysis. The researchers evaluated the long-term connection between FDI inflows and economic growth indicators by employing panel data covering various years and regions. The study's findings demonstrated a positive and statistically significant link between FDI and economic growth, highlighting the crucial role of FDI inflows in fostering economic development in Nigeria. Bhuiyan and Chowdhury (2020) investigated the relationship between macroeconomic variables and stock market indices in the US and Canada. Their findings indicate a stable relationship between the macroeconomic variables and the sectoral indices examined. Additionally, they found that the US money supply and interest rate significantly influence the Canadian stock market. Levine and Zervos (1998) exhibited cross-country econometric evidence demonstrating that in a sample of 47 countries, stock exchange liquidity contributed a hugely positive effect on Gross domestic product development between 1976 and 1993. We can say that the Levine-Zervos results are not powerful for elective determinations in light of the deficient way they control for anomalies in their data. We demonstrate that when one appropriately controls for exceptions, stock market liquidity never again applies any measurably recognizable impact on Gross domestic product development.

3. Relationship between Macroeconomic Uncertainty and Economic Growth

Quantifying economic uncertainty is challenging. Consequently, the empirical literature features a variety of uncertainty proxies, and new measures are continually being developed (Cascaldi-Garcia, 2023). This uncertainty arises from multiple sources, such as volatile inflation rates, unpredictable interest rates, fluctuating GDP growth, unstable fiscal policies, and global economic conditions (Abere and Akinbobola, 2020). Macroeconomic uncertainty can result in various negative impacts on the economy, including financial market volatility, shifts in consumer behavior, policy challenges, and changes in business investment decisions (Dimic 2016; Plakandaras, Gupta, and Wohar, 2019). Adarov (2021) investigates the dynamic interplay among macroeconomic imbalances, the financial cycle, and the business cycle. Using the GMM and panel VAR paradigm, he examined 24 nations, classifying them as either bank- or market-based economies. According to Adarov's research, financial cycles significantly influence macroeconomic imbalances; expansions cause the economy to overheat and put pressure on public debt-to-GDP ratios to decline. In bank-based economies, financial disequilibrium leads to a more profound and rapid response to economic cycles; in market-based economies, it is more chronic but mild, and it has greater significance for the dynamics of the public debt and current account. Ayeni and Faninuyan (2022) investigated the connections between uncertainty, macroeconomic variables, and capital market performance in Nigeria. Their results indicated that uncertainty does not influence Nigeria's macroeconomic performance. However, the price of crude oil significantly and positively affects the country's gross domestic product, all-share index, and money supply.

Macroeconomic uncertainty and natural gas pricing were the main subjects of Shi and Shen's (2021) investigation. The U.S. market for hub pricing, the Japanese market for oil indexation, and the German market for the transition between the two pricing regimes are the three markets he names, together with the three distinct gas pricing methods. The study also looked into the dynamic causal relationship between shocks to macroeconomic uncertainty and how natural gas prices are set. The result demonstrates that macroeconomic uncertainty is a significant factor in influencing changes in natural gas prices, which in turn influences oscillations in the business cycles of the countries under investigation. In addition, a novel demand pattern known as the Asian Premium phenomenon was identified, which contributes to the evidence that the factors influencing gas prices in the countries of natural gas differ (Dokas, Oikonomou, and Panagiotidis, 2023). High public debt nations exhibit far more powerful effects on fiscal stance and output gap trajectories; nevertheless, Ali & Fei's (2016) study was limited to a single nation. The

analysis determined that Malaysia's economy is dependent on banks and concluded that correct stock prices, bank credits, and actual output are positively correlated over the long run. However, both credit and stock prices can remain consistently higher than their basic values if actual output is not adjusted quickly enough to keep up with credit expansion or stock price increases, and if the homogeneity of the latter two variables is poor. As a result of increasing market uncertainty, which has a long-term negative association with output, the situation may be harmful. Dynamics research indicates that actual output, real credit, and real stock prices are likely to decline.

According to Bhuiyan and Chowdhury (2020) stock market indices and macroeconomic variables while the scope is US and Canada. The study's findings show a stable relationship between macroeconomic variables and sectoral indices adopted in the study. In addition, the US money supply and the interest rate were found to form an explanation for the Canadian stock market. In the same vein, Strobel et al. (2020) used a different approach to examine the relationship between market concentration and monetary policy. In the study, market concentration was examined about the uncertainty of the US economy at the point of carrying out the study. The study's findings show that investment and production in the country have an effect on demand shock in the market which was not expected. As such, it was discovered that shocks related to global unpredictability are a significant cause of economic fluctuations. Additionally, the predicted macroeconomic uncertainty harms the financial and stock markets and significantly explains the cyclical downturn in economic growth.

4. Financial Stock Market and Economic Growth in Nigeria

Numerous studies conducted both inside and outside of Nigeria have largely acknowledged the role of the capital market in the socioeconomic development and expansion of both developed and emerging countries, such as Nigeria (Bertram, 2018). This job is thought to be achievable given the several roles it plays in directing financial resources and encouraging changes to strengthen the financial intermediation sector and link the economy's deficit and surplus sectors. However, the main motivation behind the creation of these markets was the commonly accepted belief that direct credit has not been effective in promoting growth. The purpose of stock markets is to ensure efficiency in business operations, raise funds for investments, and support economic progress. The term capital market refers to a wider range of trading venues for financial items, including the stock market (Véron & Wolff, 2016). In this sense, it is possible to link the various economic units as mentioned above, since stock markets have been shown to ensure efficient capital allocation and utilization in the domestic economy, particularly in developed economies, and to stimulate economic growth by raising capital for companies' investment needs.

A well-developed financial structure is thought to encourage investments because it can easily identify and finance profitable investments. Additionally, the spreading of risks and enabling the exchange of goods and services are easily attainable in a developed market. Pan and Mishra (2018) think that the development level of a particular country plays a vital part in deciding the significance and the nature of the relationship existing between stock performance and economic growth. It is asserted that this effect is most felt in emerging economies. The emergence and development of stock markets in emerging countries like Nigeria has recently increased in frequency. Despite the Nigerian stock market's limited size and illiquid environment, both its continuous existence and performance may have a substantial impact on economic activity (Joseph & Ezenduka, 2020). For instance, Akenten, Boateng, and Kiros, (2020) contended that capital markets can mobilize local savings even in less developed economies, and they can also distribute the funds raised more effectively and efficiently for productive uses. Therefore, by mobilizing domestic savings and directing such investments toward profitable purposes, stock markets, particularly in less developed economies like Nigeria, play a crucial role in promoting and boosting economic growth (Osakwe & Ananwude, 2017).
Undoubtedly, the allocation of cash to various sectors of the economy promotes economic growth and development. Consequently, stock markets are viewed as complex institutions entwined with vital channels via which long-term capital of the major economic sectors – families, companies, and government – are collected, integrated, and made available to the various economic sectors. Stock markets are useful tools for mobilizing savings and distributing them across competing entities, which is important for economic efficiency and growth. As economies grow, additional funding is therefore thought to be required to meet the rapid expansion (David-Wayas, 2014). Moreover, stock markets increase the effectiveness of the monetary system by fostering competition among different types of financial instruments. This lowers the cost of raising money for borrowers and increases the savings return for those who save. The traditional theories hold that, in general, there is no connection between the expansion of the financial market and the expansion of the economy, despite the stock market's

identified potential. Furthermore, Hajilee & Al Nasser, (2017) argued that achieving faster economic growth is probably not dependent on the stock market. These opposing viewpoints make it imperative to investigate whether, in a developing nation such as ours, there is a meaningful empirical relationship between stock market success and economic growth.

5. Data Section

The present study considers yearly time series data of five (5) macroeconomic variables; Gross domestic product, unemployment rate, inflation, interest rate, and stocks traded. The yearly time series data has been collected for the period from 1985 to 2018 for the five macroeconomic variables. The sources of data used for this study are secondary data and were sourced from the World Bank Data Bank using the world development indicators for the variables for Nigeria as the country (World Bank, 2019). A regression analysis was conducted to check the impact of each of the independent variables on the dependent variable. This is just to know which or if any of the independent variables has a direct or inverse relationship with the dependent variables.

Correlation analysis was also done to check the correlation between the variables to know whether they are positively correlated or negatively correlated and how this affects gross domestic product growth. The correlation analysis showed a negative relationship between the explanatory variables. This means that the correlation coefficient between the independent variables is negative and therefore does any have a high impact on the dependent variable, gross domestic product.

Table 1 below shows the correlation analysis among the independent variables.

Table 1: Correlation analysis of the independent variables

	unempl~r	inflat~c	real in~r	stocks~t
unemployme~r	1.0000			
inflationc~c	0.1190	1.0000		
realintere~r	-0.2476	0.703	1.0000	
stockstrad~t	-0.2370	-0.5579	-0.2539	1.0000

Table 2: Descriptive statistics of gross domestic product, unemployment, inflation, interest rates, and stocks traded

Variable	Obs	Mean	Std. Dev.	Min	Max
gdpgrowtha~g	40	2.7725	2.030345	-2.78	7.26
unemployme~r	40	6.5265	1.56367	3.99	9.69
inflationc~c	40	4.03725	2.861271	-.36	13.51
realintere~r	40	4.3765	2.447692	-1.28	8.72
stockstrad~t	40	112.316	98.61395	7.95	320.99
Time	40	1994.5	11.69045	1975	2014

6. Methodology

The data used for this research is time series data as previously stated. The ordinary least square method of the econometric approach was used in estimating. The models of this research work will be specified mathematically and econometrically. The traditional Cobb-Douglas production function was employed. The mathematical model used in this study is specified as;

Eq. 1

$$GDP_x = B_o + \beta_1(UNP) + \beta_2(INF) + \beta_3(INT) + \beta_4(STCK\ PXS) + e_x \quad (2)$$

Where

GDP= Gross domestic product, (GDP growth, annual %)

UNEP= Unemployment, total (% of total labor force, national estimate)

INF= Inflation, consumer price index (annual%)

INT= Real interest rate (%)

STCK TRD= Stocks Traded, total value (% of GDP)

Also,

B_o, β_1, β_2, β_3, β_4 are parameters to be estimated

e is the error term
x is the time

Therefore, equation 1, shows the relationship between economic growth, (GDP), unemployment, inflation, interest rate, and stocks traded. The a-priori expectation is that β_o, β_1, β_2, β_3, and $\beta_4 > 0$.

7. Empirical Results

The regression analysis carried out, showed that unemployment, inflation, interest rate, and stocks traded are negatively related to gross domestic product if regressed together. However, there is a positive relationship between gross domestic and interest rate when gross domestic product is regressed against interest rate and stocks traded but it is not statistically significant. Table 2 depicted above contains the regression analysis result of the model specified above. The result indicates that the null hypothesis is rejected following the rule of thumb when t-calculated is.
The unemployment rate affects the gross domestic product (GDP) growth in a negative way from the results, it can be explained that a 1 percentage (1%) increase in unemployment decreases the growth by .55, which is the highest impact on Gross Domestic Product from the independent variables. The inflation rate is also negatively related to gross domestic product.

The interpretation of the R-square of 0.31 illustrates that a 31% variation in gross domestic product growth is explained by variation in unemployment, variation in inflation, variation in interest rate, and also variation in stocks traded. This shows us that 69% of the variation in gross domestic product is left unexplained and is due to variation in the error term or variation in other variables that implicitly form part of the error term. Also, the adjusted R-square with a value of 0.23 which shows 23% variation in the dependent variable is explained by the independent variable when the degree of freedom is taken care of.
The model, $GDP = B_o + \beta_1(UNP) + \beta_2(INF) + \beta_3(INT) + \beta_4(STCK\ PXS)$ can be written as:
GDP = 8.734674 – .5518546(.1990415) - .2368677(.1207912) - .0228(.1282085) -.0116138(.003777)
Where the coefficients are presented with the standard error in parenthesis.
GDP = UNP(0.009)** + INF(0.058)*** + INT(0.860)*** +STCKS TRD(0.004)**
Where the t-statistics are in parenthesis.

The result shows a negative relationship between inflation rate and unemployment which corresponds with Mohseni and Jouzaryan's (2016) findings which demonstrated a negative relationship between unemployment, inflation, and gross domestic product when he conducted his research. Thus, the findings of this study are similar to those of Ademola & Badiru (2016) and Gómez & Irewole (2024) who related inflation and unemployment with growth, as well as unemployment and inflation. Therefore, the findings of this study are consistent with existing literature. Kiley and Robert (2017) also state that interest rates negatively correlated to inflation which was also shown in the research under Table 1. The results on the effect of the inner weight between the interest rate on the Gross Domestic Product produces a path coefficient of -.0228 with t-statistics of -0.12 is less than the value of determination of 0.87. Also, the results of inner weight on the effect of inflation on Gross Domestic Product generate a path coefficient of -.5518 with a t-statistic of 0.009 which is smaller than the value of the constant at 0.005. This indicates that there is a statistically significant relationship between inflation on Gross Domestic Product. The results of inner weight on the effect of stocks traded on Gross Domestic Product generate a path coefficient of -0.17 with a t-statistics of 0.004 which is smaller than the value of the constant at 0.005 (5%). This indicates that there is a statistically significant relationship between stocks traded and Gross Domestic Product.

Table 3: Regression analysis using Stata

Source	SS	df	MS	Number of obs	=	40
				F(4, 35)	=	3.91
Model	49.6221031	4	12.4055258	Prob > F	=	0.0100
Residual	111.147646	35	3.17564703	R-squared	=	0.3087
				Adj R-squared	=	0.2296
Total	160.769749	39	4.12230126	Root MSE	=	1.782

gdpgrowthan~g	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
unemploymen~r	-.5518546	.1990415	-2.77	0.009	-.9559304	-.1477789
inflationco~c	-.2368677	.1207912	-1.96	0.058	-.4820869	.0083515
realinteres~r	-.0228	.1282085	-0.18	0.860	-.2830771	.2374772
stockstrade~t	-.0116138	.003777	-3.07	0.004	-.0192814	-.0039462
_cons	8.734674	1.950753	4.48	0.000	4.774434	12.69491

The results of the analysis presented above show that a 1% increase in the inflation rate will lead to a decrease in gross domestic product growth by .23. Also, interest rate negatively affects gross domestic product growth. The results show that a 1% increase in real interest rate will lead to a decrease in growth by .022. Lastly, stocks traded are also negatively related to gross domestic product because a 1% increase in the value of stocks traded will lead to a decrease in gross domestic growth by .011. The results imply that rising inflation generally hampers economic growth thus diminishing purchasing power and creating uncertainty, which may lead to a decline in consumer spending and investment. Additionally, increased real interest rates tend to dissuade borrowing and investment due to higher borrowing costs, which can further slow economic activity. The observed negative link between stock market activity and GDP growth suggests that a booming stock market does not necessarily equate to stronger economic performance. It may indicate speculative trading or a diversion from productive investments in the real economy, or it could signal economic imbalances or bubbles that could ultimately impede growth. Ongoing observation of inflation, interest rates, and stock market activity is essential. If these factors begin to negatively affect GDP growth, implementing specific economic policies and strategies may be required to address and counteract potential negative impacts.

8. Conclusion

The findings revealed that the coefficient of unemployment is negative and statistically significant while inflation is also negative but has no significant effect on gross domestic product. Also, the coefficient of interest rate is negatively related but has no statistically significant effect on gross domestic product while the stocks traded coefficient is negative and statistically significant to gross domestic product. Thus, unemployment and stocks traded both substantially affect economic growth, while inflation and interest rate both have little substantial effect on it. The twin macroeconomic factors, unemployment and inflation are the real issues going up against the economy which have the penchant to impact other economic and social components. The failure of the government to locate an enduring answer to these issues has influenced the monetary life, economic activities, and political system of the country in general. In this way, this paper examines exactly how unemployment, inflation, interest rate, and stocks traded generously influence gross domestic product.

The flexibility coefficient of GDP to expansion rate is inelastic because of the way that inflation rate, unemployment, interest rate and stocks traded are an essential macroeconomic variable to the progressions of GDP. To policymakers this could infer that regardless of the possibility that different elements impact monetary development, for example, inflows and surge of FDI, human capital, venture, innovative advance, money-related frameworks, topographical position of the nation At long last, future research should concentrate on board information and use of VAR models to think about the long-run dynamic nature of these factors. This study shows that unemployment and stocks traded substantially affect economic growth whereas inflation and interest rate have a little substantial effect on economic growth (i.e. F-stat value 3.91 is closer to 4). This study recommends rebuilding the economy through internal

development and not along remote obtained belief systems and thus proficient adaptation of present-day innovations to make more economical occupations and improve the genuine wage of workers is advised. There is a need for strong institutional collaboration and link among ministries for dealing with all these macroeconomic variables; unemployment, inflation, interest rate, and gross domestic product growth in the country. Consequently, the government should guarantee macroeconomic administration of price stability and thereby enhance the framework of power which may create more businesses and reduce unemployment.

References

Abere, S. S., & Akinbobola, T. O. (2020). External shocks, institutional quality, and macroeconomic performance in Nigeria. *SAGE Open, 10*(2), 215824402091951. https://doi.org/10.1177/2158244020919512

Ademola, A., & Badiru, A. (2016). The impact of unemployment and inflation on economic growth in Nigeria (1981–2014). *International Journal of Business and Economic Sciences Applied Research, 9*(1), 47-55.

Ajayi, L. (2020). Foreign direct investment, domestic investment, and economic growth nexus: Evidence from Nigeria. *Journal of African Business, 21*(4), 504-520.https://doi.org/10.1080/15228916.2020.1791542

Akenten, W. N., Boateng, C., & Kiros, H. (2020). The role of capital markets in economic growth: Evidence from Ghana. *SSRN Electronic Journal*. https://doi.org/10.2319/ssrn.3549931

Akinsola, F. A., & Odhiambo, N. M. (2017). Inflation and economic growth: A review of the international literature. *Journal of Developing Areas, 51*(3), 1-16. https://doi.org/10.1353.Jada.2017.0078

Ali, A., & Fei, Y.S. (2016). The relationship between inflation and economic growth: An empirical analysis. *Journal of Asian Finance, Economics and Business, 3*(2), 5-11. https://doi.org/10.13106/jafeb.2016.vol3.no2.5

Aremu, O. M. (2020). *Effect of selected macroeconomic variables on the performance of Nigeria's economy*. (Vol 38) VIII.

Ayeni, E., & Fanibuyan, O. (2022). The dynamics of uncertainty, macroeconomic variables, and capital market performance: A case study of Nigeria. *Research in Globalization, 5*(100107), 100107. https://doi.org/10.1016/j.resglo.2022.100107

Bartolucci, F., Choudhry, M. T., Marelli, E., & Signorelli, M. (2018). GDP dynamics and unemployment changes in developed and developing countries. *Applied Economics, 50*(31), 3338-3356. https://doi.org/10.1080/00036846.2017.1420888

Bertram, O. A. (2018). Economic growth and capital market development in Nigeria: An appraisal. *Journal of Business Management and Economic Research, 2*(4), 27-38. https://doi.org/10.29226/TR1001.2018.57

Caldara, D., Fuentes-Albero, C., Gilchrist, S., & Zakrajšek, E. (2016). The macroeconomic impact of financial and uncertainty shocks. *European Economic Review, 88*, 185-207. https://doi.org/10.1016/j.euroecorev.2016.04.012

Cascaldi-Garcia, D., Sarisoy, C., Londono, J. M., Sun, B., Datta, D. D., Ferreira, T., & Rogers, J. (2023). What is certain about uncertainty? *Journal of Economic Literature, 61*(2), 624-654. https://doi.org/10.1257/jel.20211527

Christiano, L. J., Motto, R., & Rostagno, M. (2014). Risk shocks. *American Economic Review, 104*(1), 27-65. https://doi.org/10.1257/aer.104.1.27

Dimic, N., Kiviaho, J., Piljak, V., & Äijö, J. (2016). Impact of financial market uncertainty and macroeconomic factors on stock-bond correlation in emerging markets. *Research in International Business and Finance, 36*, 41-51. https://doi.org/10.1016/j.ribaf.2015.09.001

Dokas, I., Oikonomou, G., Panagiotidis, M., & Spyromitros, E. (2023). Macroeconomic and uncertainty shocks' effects on energy prices: A comprehensive literature review. *Energies, 16*(3), 1491. https://doi.org/10.3390/en16031491

Emmanuel, I. J. (2016). Effect of foreign direct investment on economic growth in Nigeria. *European Business and Management, 2*(2), 40-46. https://doi.org/10.11648/j.ebm.20160202.14

Fagbemi, F., Adeosun, O. A., & Bello, K. M. (2022). Stock market development: A reflection of governance regulatory framework in Nigeria. *Journal of Capital Markets Studies, 6*(1), 71-89. https://doi.org/10.1108/JCMS-09-2021-0036

Fatai, B. O., & Bankole, A. (2013). Empirical test of Okun's Law in Nigeria. *International*

Journal of Economic Practices and Theories, *3*(3), 227-231.

Ford, R., & Laxton, D. (1999). World public debt and real interest rates. *Oxford Review of Economic Policy*, *15*(2), 77-94. https://doi.org/10.1093/oxrep/15.2.77

Gómez, M., & Irewole, O. E. (2024). Economic growth, inflation and unemployment in Africa: An autoregressive distributed lag bounds testing approach, 1991–2019. *African Journal of Economic and Management Studies*, *15*(2), 318-330. https://doi.org/10.1108/AJEMS-01-2023-0038

Guru, B. K., & Yadav, I. S. (2019). Financial development and economic growth: Panel evidence from BRICS. *Journal of Economics, Finance, and Administrative Science*, *24*(47), 113–126. https://doi.org/10.1108/JEFAS-03-2018-0030

Imoagwu, C. P., & Ezeanyeji, C. I. (2019). Financial development and economic growth nexus in Nigeria. *International Journal of Business and Management Invention*, *8*(3), 50-63.

Joseph, E. M., & Ezenduka, V. G. (2020). Stock market performance and economic growth in Nigeria (1985 - 2018). *Academic Journal of Research in Business and Accounting*, *5*(4), 143–168.

Kavya, T. B., & Shijin, S. (2020). Economic development, financial development, and income inequality nexus. *Borsa Istanbul Review*, *20*(1), 80–93. https://doi.org/10.1016/j.bir.2019.10.002

Keswani, S. (2021). Emotional finance plays an important role in investment decisions. In *Research anthology on personal finance and improving financial literacy* (pp. 40-54). IGI Global.

Kiley, M. T., & Roberts, J. M. (2017). Monetary policy in a low interest rate world. *Brookings Papers on Economic Activity*, *2017*(1), 317–396.

Levine, R., & Zervos, S. (1998). Stock markets, banks, and economic growth. *The World Bank Policy Research Working Paper No 1690*. Washington, DC: World Bank.

Merrill, T. W. (2020). The economics of leasing. *The Journal of Legal Analysis*, *12*, 221–272.

Mohseni, M., & Jouzaryan, F. (2016). Examining the effects of inflation and unemployment on economic growth in Iran (1996-2012). *Procedia Economics and Finance*, *36*, 381–389.

Nnakee, U. N., Ngong, C. A., Onyejiaku, C. C., Moguluwa, S., & Onwumere, J. U. J. (2024). Examining the long-run relationship between stock market development and Nigerian economic growth. *Journal of Financial Economic Policy*.

Olaniran-Akinyele, O. F., & Bada, O. T. (2020). Labor force participation and inclusive growth in Nigeria: An empirical assessment of the youth's contribution. *Journal of Management and Technology*, *6*(1), 57–66.

Orji, A., Ogbuabor, J. E., Nwosu, E. O., Anthony-Orji, O. I., & Okpala, A. J. (2019). FDI, remittance inflows, and economic development in a developing country: What do Nigerian data show? *Journal of Academic Research in Nigeria*, *11*(1), 27–45.

Osakwe, C., & Ananwude, A. (2017). Stock market development and economic growth: Comparative evidence from two emerging economies in Africa – Nigeria and South Africa. *Archives of Current Research International*, *11*(1), 1–15. https://doi.org/10.9734/ACRI/2017/32104

Pan, L., & Mishra, V. (2018). Stock market development and economic growth: Empirical evidence from China. *Economic Modelling*, *68*, 661–673. https://doi.org/10.1016/j.econmod.2017.08.016

Perego, E. R., & Vermeulen, W. N. (2016). Macro-economic determinants of European stock and government bond correlations: A tale of two regions. *Journal of Empirical Finance*, *37*, 214–232. https://doi.org/10.1016/j.jempfin.2016.03.011

Plakandaras, V., Gupta, R., & Wohar, M. E. (2019). Persistence of economic uncertainty: A comprehensive analysis. *Applied Economics*, *51*(41), 4477–4498. https://doi.org/10.1080/00036846.2019.1591616

Popp, A., & Zhang, F. (2016). The macroeconomic effects of uncertainty shocks: The role of the financial channel. *Journal of Economic Dynamics and Control*, *69*, 319–349. https://doi.org/10.1016/j.jedc.2016.06.003

Qamruzzaman, M., & Wei, J. (2018). Financial innovation, stock market development, and economic growth: An application of ARDL model. *International Journal of Financial Studies*, *6*(3), 69. https://doi.org/10.3390/ijfs6030069

Rudd, J. B. (2022). Why do we think that inflation expectations matter for inflation? (And

should we?). *Review of Keynesian Economics, 10*(1), 25–45. https://doi.org/10.4337/roke.2022.01.02

Samad, A., & People & Global Business Association. (2023). Does Okun's Law and its Coefficient value, β exist? Evidence from Sixteenth South and Southeast Asian Countries during 1991-2020. *Global Business & Finance Review, 28*(1), 88–101. https://doi.org/10.17549/gbfr.2023.28.1.88

Strobel, J., Nguyen Thanh, B., & Lee, G. (2020). Effects of macroeconomic uncertainty and labor demand shocks on the housing market. *Real Estate Economics, 48*(2), 345–372. https://doi.org/10.1111/1540-6229.12259

Udude, C. C., & Nnachi, D. N. (2017). Testing the validity of Okun's law in Nigeria: An autoregressive distributed lag approach (1980-2013). *World Applied Sciences Journal, 35*(5), 754–766. https://doi.org/10.5829/idosi.wasj.2017.754.766

Véron, N., & Wolff, G. B. (2016). Capital markets union: A vision for the long term. *Journal of Financial Regulation, 2*(1), 130–153. https://doi.org/10.1093/jfr/fjw002

Wogari, T. (2023). An econometric analysis of the impact of inflation and economic growth on unemployment in Ethiopia. *European Business & Management, 8*(6), 106–123. https://doi.org/10.11648/j.ebm.20220806.12

World Bank. (2019). World Development Indicators. Retrieved from https://data.worldbank.org/indicator