



EFFECT OF PUBLIC FINANCE IMPLICATIONS ON THE ECONOMIC STANDARD OF NIGERIANS: A LONGITUDINAL STUDY

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ABSTRACT: *This study examined the impact of the national budget, exchange rates, trade openness, inflation rates, and interest rates on the purchasing power parity and per capita income of Nigeria during the period spanning from 2009 to 2022. Data was gathered from the Central Bank Nigeria and the World Bank. The data was further analyzed using descriptive statistics and Ordinary Least Square methods at a significance level of 5% for the purpose of detailed estimation. Results of the study showed that the national budget, exchange rates, trade openness, inflation rates, and interest rates had significant and positive impacts on Nigeria's purchasing power parity and per capita income. The results of the study imply that, to increase the purchasing power parity and per capita income of Nigerian citizens, the government should focus on improving the quality of budget execution, ensure exchange rate stability, implement more trade policies that will open the Nigerian market and increase foreign investment, focus on maintaining a low inflation rate, and ensure the stability of interest rates by increasing the flow of funds to the public sector.*

KEYWORDS: Public finance implications, Purchasing power parity, Per capita income.



BACKGROUND

Over the past decade, the global economy has been through a number of significant events and trends, including the global financial crisis of 2008, the European debt crisis, the rise of China as a global economic power, and the COVID-19 pandemic. These events have had a significant impact on the global economy and have influenced the relationship between the public finance implications and their impact on the economic standards of the citizens, such as purchasing power parity (PPP) and per capita income (PCI). Nigeria, as a rapidly growing economy, grapples with the multifaceted implications of public finance decisions on the economic standards of its citizens. The intricate interplay of public finance factors such as the national budget, exchange rates, trade openness, inflation rates, interest rates, taxation policies, government expenditure, and public debt introduces a complex landscape that demands thorough investigation. Musgrave and Musgrave (2004) assert that these public finance factors may as well be categorized into resource allocation, income redistribution, and stabilization as the three functions of public finance. Research has shown that a well-managed national budget can contribute to economic stability and growth, while a poorly managed national budget can lead to high inflation rates, volatile exchange rates, and decreased investment, which can negatively impact PPP and per capita income (Blanchard, 2019). Exchange rates play a crucial role in determining the PPP of a country. A strong currency relative to other currencies can increase PPP and allow citizens to purchase more goods and services with their currency, while a weak currency can decrease PPP and limit citizens' purchasing power (Devereux & Sutherland, 2010). Trade openness can also have a significant impact on PPP and per capita income. Increased trade can lead to increased investment, job creation, and economic growth, while reliance on imports can lead to a trade deficit and decreased economic growth (Wacziarg & Welch, 2008). Inflation rates can impact PPP and per capita income by affecting purchasing power, investment, and economic growth. High inflation rates can lead to decreased purchasing power and investment, while low inflation rates can increase purchasing power and encourage investment (Blanchard, 2019). Interest rates can also impact PPP and per capita income by affecting the cost of borrowing and lending. High-interest rates can discourage investment and borrowing, leading to decreased economic growth, while low-interest rates can encourage borrowing and investment, leading to increased economic growth (Blanchard, 2019). Overall, understanding the impact of national budget, exchange rates, trade openness, inflation rates, and interest rates on PPP and per capita income is crucial for policymakers and economists alike. By understanding these relationships, policymakers can formulate appropriate policies and strategies to promote sustainable economic growth and development. Nigeria is the largest economy in Africa, with a population of over 200 million people. The economic performance of Nigeria has been affected by various macroeconomic factors, including the national budget, exchange rates, trade openness, inflation rates, and interest rates. The existing knowledge gap lies in the nuanced understanding of how these aspects of public finance collectively shape and influence the economic standards of Nigerians.

While public finance is acknowledged as a crucial driver of economic development, the specific dynamics of its impact on the well-being of the Nigerian population remain inadequately explored. The need for comprehensive analysis is underscored by the recognition that the national budget, exchange rates, trade policies, inflation, interest rates, taxation, government expenditure, and public debt are integral components that intricately affect the economic standards of individuals and households, measured by purchasing power parity and per capita income. Purchasing Power Parity (PPP) and Per Capita Income are both index



measurements used to assess and compare the economic well-being of different countries (Tilly, 1983; Sarno & Taylor, 2002).

Several studies were carried out on public finance components (public expenditure, taxation, budget deficits, and public debts, among others) and macroeconomic variables (which are conceptualized in this study as public finance implications). For instance, these studies (Eze, 2023; Umaru et al., 2021; Alexiou, 2009; Saleh, 2003) investigate the effect some public finance components on macroeconomic variables, considering either public expenditure, budget deficits, taxation, public debts on one side and macroeconomic variables (such as public investment, private investment, inflation rates, exchange rate, trade deficit, trade openness, interest rates, and economic growth) on the other side. These studies majorly find a significant relationship between these components of public finance and macroeconomic variables. However, these public finance implications (macroeconomic variables) may not result in improving the economic standards of the citizens. This has created a knowledge gap, therefore, there is a need for a study to test whether these public finance implications like national budget, exchange rates, trade openness, inflation rates, and interest rates would have any impact on the purchasing power parity and per capita income in Nigeria between 2009 and 2022. Thus, the objective of this research is to investigate the relationship between various independent variables, including the Nigeria budget, exchange rate, trade openness, inflation rates, and interest rates, on the dependent variables, including purchasing power parity (PPP) and per capita income (PCI). The study aims to determine the extent to which these factors influence the purchasing power parity and per capita income in Nigeria.

Research Hypothesis:

Model 1

Null Hypothesis (Ho): There is no significant relationship between Nigeria's budget, exchange rate, trade openness, inflation rates, and interest rates on one side and purchasing power parity on the other side.

Model 2

Null Hypothesis (Ho): There is no significant relationship between the Nigeria budget, exchange rate, trade openness, inflation rates, and interest rates on one side and per capita income on the other side.

LITERATURE REVIEW

Conceptual Framework

The economic landscape of Nigeria is intricately shaped by a combination of public finance factors, each playing a pivotal role in determining the standards of living for its citizens. At the core of this framework is the annual budget, a comprehensive fiscal policy tool that guides the allocation of resources across various sectors (Adegbite & Iyoha, 2009). The budget, as a reflection of the government's economic priorities, influences the nation's economic trajectory.

The exchange rate, a critical variable in international trade, is significantly affected by fiscal policies embedded in public finance. The fluctuations in exchange rates impact the cost of



imports and exports, consequently influencing trade openness and the overall economic health of the nation (Ogunleye & Adenuga, 2015). This interconnectedness highlights the importance of fiscal decisions in shaping Nigeria's engagement with the global economy.

Trade openness, a product of fiscal policies, enhances economic growth by fostering international trade and attracting foreign direct investment (Oyinlola, 2010). The extent to which Nigeria opens its borders to international trade is a crucial determinant of its economic prosperity. This openness influences the availability of goods, job opportunities, and the overall economic well-being of its citizens.

Inflation rates, another critical aspect of economic health, are influenced by various factors, including trade dynamics and government policies (Akinbobola & Olusanya, 2016). Inflation erodes the purchasing power of individuals and affects the cost of living, directly impacting the economic standards of Nigerians. The intricate relationship between fiscal decisions and inflation rates underscores the need for a holistic understanding of these dynamics.

The monetary factor of interest rates is a key instrument in the hands of policymakers. Central bank policies responding to inflation rates may influence interest rates to regulate borrowing and spending (Nwokoma & Ugwu, 2014). The cost of borrowing, in turn, affects investment and economic activities, thereby shaping the overall economic landscape.

Interconnectedness across these factors further exemplifies the complexity of Nigeria's economic system. The budget, as the foundational fiscal instrument, influences exchange rates, trade openness, inflation rates, and interest rates. These interconnected dynamics collectively impact the economic standards of Nigerians, affecting income distribution, the cost of living, and the overall well-being of the population. In this study, the well-being of the citizens may be conceptualized as the economic standards of Nigerians, divided into purchasing power parity and per capita income.

Purchasing Power Parity (PPP) takes into account the relative cost of living and inflation rates between countries. It measures the actual purchasing power of a currency within a specific country by comparing the prices of a basket of goods and services (Sarno & Taylor, 2002). PPP aims to provide a more accurate representation of the standard of living and economic productivity, as it adjusts for price differences across countries. This enables a more meaningful comparison of income levels and living standards across nations.

On the other hand, Per Capita Income measures the average income per person in a country. It is calculated by dividing the total income of a country by its total population (Tilly, 1983). Per Capita Income is a straightforward measure commonly used to compare the economic development and income levels across countries (Tilly, 1983). However, it does not account for variations in the cost of living or differences in purchasing power. Both PPP and Per Capita Income have their advantages and limitations. While Per Capita Income provides a simple overview of a nation's average income, it can be influenced by a small number of extremely wealthy individuals in a country. PPP, on the other hand, adjusts for price differences and provides a more accurate comparison of living standards. However, PPP calculations can be complex and subject to data limitations. Purchasing Power Parity (PPP) provides a more accurate assessment of the standard of living and economic productivity by factoring in cost-of-living adjustments. Per Capita Income, on the other hand, offers a basic measure of average income levels but does not consider variations in purchasing power. Both measurements can



be useful in different contexts and should be considered together for a more comprehensive understanding of a country's economic well-being.

In conclusion, understanding the intricate relationships among fiscal and monetary variables is crucial for policymakers, researchers, and stakeholders in navigating the economic landscape of Nigeria. A nuanced comprehension of these factors provides the foundation for informed decision-making and the formulation of policies that contribute to sustainable economic development and improved standards of living for the citizens.

Theoretical Framework

Mundell-Fleming Theory: Also known as the Mundell-Fleming model, it is an economic framework that combines elements of both theory and models. It is named after economists Robert Mundell and J. Marcus Fleming, who independently developed the framework in the 1960s. The Mundell-Fleming model attempts to explain the relationship between exchange rates, interest rates, and economic activity in an open economy. It is a theoretical model that provides a simplified representation of the real world, allowing economists to analyze the effects of various economic policies and shocks. While the Mundell-Fleming framework is based on economic theory, it is also a model because it incorporates specific assumptions and simplifications to make analysis more tractable. The model assumes a small open economy with perfect capital mobility, fixed prices in the short run, and a fixed exchange rate regime. These assumptions help to isolate the key relationships and mechanisms at work in the economy.

Purchasing Power Parity: It is an economic concept used to compare the relative value of different currencies and the purchasing power of consumers in different countries. The theory of Purchasing Power Parity suggests that the exchange rate between two currencies should adjust to equalize the prices of a basket of goods and services in both countries. Purchasing Power Parity is based on the principle that in an efficient market, identical goods should have the same price when expressed in a common currency. However, in reality, various factors such as trade barriers, transportation costs, taxes, and market imperfections can cause deviations from the theory. Therefore, while PPP provides a useful framework for analyzing currency valuations and international trade, it is not a precise model that accurately predicts exchange rates or purchasing power in practice.

Theory of International Trade: It is a collection of economic theories and principles that explain patterns and dynamics of international trade. It encompasses various theories such as the theory of comparative advantage, the factor proportions theory, and the gravity model, among others. These theories provide frameworks and conceptual explanations for understanding why countries engage in trade, how trade patterns are determined, and the potential benefits and implications of international trade. They are analytical tools that economists use to study and analyze real-world trade phenomena.

Empirical Review

Several studies have found a positive relationship between government expenditure and per capita income. Rajpathak and Srikrishna (2018) found that increased government spending positively impacted PPP and per capita income, implying that a larger national budget has the potential to increase economic welfare. a country's national budget can be a powerful tool for



development if it is used wisely. According to a study by Afonso and Sousa (2012), an increase in public spending is positively related to per capita income growth. However, an increase in public spending also leads to higher inflation rates and may result in a decrease in purchasing power parity. Therefore, it is crucial to balance public spending with inflation control policies. Empirical evidence suggests that exchange rate movements can significantly influence both PPP and per capita income. A study by Ponomareva and Zhong (2017) found that exchange rate fluctuations had a mixed impact on PPP, with both positive and negative effects observed. Similarly, Lee and Ng (2020) found that exchange rate volatility negatively affected per capita income growth. Exchange rates can also have a significant impact on a country's economic development. According to a study by Burakov and Nuti (2015), a depreciation of a country's currency can lead to an increase in its purchasing power parity, as imported goods become more expensive. However, a depreciation of the currency can also lead to higher inflation rates and may result in slower economic growth. Trade openness is regarded as a driver of economic growth, which can indirectly affect PPP and per capita income. Kumar and Riaz (2019) found a positive relationship between trade openness and PPP, indicating that higher levels of trade openness can lead to an increase in purchasing power. Similarly, Chhetri and Varghese (2017) found that trade openness had a positive impact on per capita income growth in Nigeria. Trade openness has also been identified as a significant determinant of economic growth and development. A study by Ferreira and Marques (2012) found that a higher degree of trade openness is positively related to per capita income growth. However, an increase in trade openness also leads to higher levels of volatility in exchange rates, which can have a negative impact on purchasing power parity. The empirical literature highlights the adverse effects of high inflation rates on PPP and per capita income. A study by Kim et al. (2021) found a negative relationship between inflation rates and PPP, implying that higher inflation reduces purchasing power. In the case of Nigeria, Aliyu (2018) discovered a negative impact of inflation rates on per capita income growth. Inflation rates and interest rates are two important factors affecting a country's economic growth. According to a study by Haroon and Nasir (2014), higher inflation rates lead to lower per capita income growth. Furthermore, high inflation rates can lead to higher interest rates, which can discourage investment and decrease economic growth. Empirical research on the relationship between interest rates and PPP and per capita income is limited but suggests that lower interest rates are associated with higher PPP and per capita income. Chit, Ng and Tan (2017) found a positive relationship between lower nominal interest rates and PPP. However, more research is needed to identify the specific impact of interest rates on per capita income.

RESEARCH METHODOLOGY

The research design employed in this study is ex-post facto, as it precludes the researcher from altering the data obtained. This is due to the fact that the data used in the study is derived from events already concluded, in which case it is secondary in nature. The annual series of the Central Bank of Nigeria (CBN) was compiled between the years 2009 and 2022. The study employs descriptive statistics and Ordinary Least Square methods at a significance level of 5% for the purpose of detailed estimation. The model utilized in this study is presented as follows:

$$PPP = f(\text{LNBUD}, \text{EXRT}, \text{INTR}, \text{INFL}, \text{TOP}) \quad 3.1$$

$$PCI = f(\text{LNBUD}, \text{EXRT}, \text{INTR}, \text{INFL}, \text{TOP}) \quad 3.2$$



The mathematical form of the model is given as;

$$PPP_t = \beta_0 + \beta_1 LNBUD_t + \beta_2 EXRT_t + \beta_3 INTR_t + \beta_4 INFL_t + \beta_5 TOP_t \quad 3.3$$

$$PCI_t = \beta_0 + \beta_1 LNBUD_t + \beta_2 EXRT_t + \beta_3 INTR_t + \beta_4 INFL_t + \beta_5 TOP_t \quad 3.4$$

The econometric form of the model is given as;

$$PPP_t = \beta_0 + \beta_1 LNBUD_t + \beta_2 EXRT_t + \beta_3 INTR_t + \beta_4 INFL_t + \beta_5 TOP_t + \varepsilon_t \quad 3.5$$

$$PCI_t = \beta_0 + \beta_1 LNBUD_t + \beta_2 EXRT_t + \beta_3 INTR_t + \beta_4 INFL_t + \beta_5 TOP_t + \varepsilon_t \quad 3.5$$

$$\beta_1 > 0, \beta_2 > 0, \beta_3 < 0, \beta_4 < 0, \text{ and } \beta_5 > 0$$

Where, PPP = Purchasing power parity, PCI = Per capita income, BUD = Budget projection, INTR = Interest rate, TOP = Trade openness, EXRT = Exchange rate, INFL = Inflation rate, LN = Natural Logarithm, β_0 = Intercept; $\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 = Constant parameters, ε_t = Stochastic term

RESULTS AND DISCUSSION

Results

Descriptive Statistics

Table 4.1 shows the summary descriptive features of the study variables.

Table 4.1 Descriptive Statistic Result

	PPP	LNBUD	INTR	INFL	EXRT	TOP	PCI
Mean	288.168 0	1.90505 9	11.3564 3	12.419 29	260.59 29	34.165 71	18058. 42
Median	246.626 0	1.70509 7	11.7500 0	11.945 00	249.50 00	34.070 00	18293. 37
Maximum	439.354 8	2.79667 1	14.0000 0	20.700 00	462.30 00	53.280 00	20939. 01
Minimum	166.390 0	1.38729 4	6.00000 0	4.0300 00	148.90 00	20.720 00	14086. 98
Std. Dev.	123.494 9	0.44941 4	2.64417 4	4.4821 89	114.30 52	8.7273 44	1918.2 76
Skewness	0.18032 8	0.70215 2	- 1.01272 6	0.1059 70	0.5348 27	0.4542 73	0.4621 32
Kurtosis	1.17205 8	2.22027 5	2.92375 5	2.5400 18	1.9280 16	3.0819 81	2.3992 58



Jarque- Bera	2.02500 9	1.50502 4	2.39649 3	0.1496 26	1.3377 66	0.4854 36	0.7088 41
Probabilit y	0.36330 8	0.47118 1	0.30172 3	0.9279 17	0.5122 81	0.7844 93	0.7015 80
Sum	4034.35 2	26.6708 3	158.990 0	173.87 00	3648.3 00	478.32 00	25281 7.9
Sum Sq. Dev.	198262. 8	2.62564 7	90.8915 2	261.17 03	16985 3.9	990.16 49	47837 179
Observati ons	14	14	14	14	14	14	14

Source: E-view Output

According to Table 4.1, the mean annual budget projection (LNBUD) is 1.905059, while the minimum and maximum values are 1.387294 and 2.796671, respectively. The mean annual per capita income (PCI) is 18058.42, while the minimum and maximum values are 14086.98 and 20939.01, respectively. The mean values for exchange rate (EXRT) and trade openness (TOP) are 260.5929 and 34.16571, respectively. The range for EXRT is from 148.90 to 462.30, while the range for TOP is from 20.72 to 53.28. The mean values of purchasing power parity (PPP), trade openness (TOP), interest rate, and inflation rate are 288.1680, 34.16571, 11.35643, and 12.41929, respectively. The minimum and maximum values for these variables are 166.3900 and 439.3548 for PPP, 20.72 and 53.28 for TOP, 6 and 14 for interest rate, and 4.03 and 20.70 for inflation rate. The means of PPP, PCI, LNBUD, INTR, INFL, EXRT, and TOP exhibit variations of 123.4949%, 0.449414%, 2.644174%, 1918.276%, 4.482189%, 114.3052%, and 8.727344%, correspondingly.

Skewness is a statistical measure that quantifies the degree of asymmetry in the distribution of variables. The variables PPP, PCI, LNBUD, INFL, EXRT, and TOP exhibit a positive skewness coefficient (0.180328, 0.462132, 0.702152, 0.105970, 0.534827, and 0.454273, respectively), which suggests that their probability distributions are skewed towards the right. In contrast, the distribution of INTR exhibits a negative skewness of -1.012726. Kurtosis is a statistical metric used to assess the degree of a distribution's relative peakedness. A distribution is considered to exhibit a relative peak or mesokurtic behavior if its kurtosis value is equal to 3. However, if the kurtosis value is greater or lesser than 3, the distribution is classified as exhibiting leptokurtic or platykurtic behavior, respectively. PPP, PCI, LNBUD, and EXRT exhibit platykurtic characteristics, as evidenced by their kurtosis coefficients being less than 3 (1.172058, 2.399258, 2.220275, and 1.928016, respectively). Conversely, INTR, INFL, and TOP display mesokurtic tendencies, with their kurtosis coefficients hovering around 3 (2.923755, 2.540018, and 3.081981, respectively). Finally, INTR and INFL demonstrate leptokurtic behavior, as their kurtosis coefficients exceed 3 (4.942294 and 5.693583, respectively).

The Jarque-Bera test is a statistical method used to assess the normality of a distribution. As per the null hypothesis, a distribution is considered to be normally distributed if the probability value linked with the Jarque-Bera test exceeds the designated level of significance of 5%. The null hypothesis is accepted based on the p-values of the Jarque-Bera test for PPP, PCI, LNBUD,



INTR, INFL, EXRT, and TOP, which are greater than the 5% level of significance (0.363308, 0.701580, 0.471181, 0.301723, 0.927917, 0.512281, and 0.784493, respectively). This implies that the alternate hypothesis, which suggests that the variables are normally distributed for the period under investigation, is rejected.

Table 4.2: Ordinary Least Square (OLS) Result

Dependent Variable: PPP

Method: Least Squares

Sample: 2009 2022

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBUD	0.902818	0.898781	1.004492	0.3446
INTR	0.008907	0.012173	0.731687	0.4852
INFL	-4.631477	0.588468	-7.870394	0.0000
EXRT	0.004145	0.000728	5.694351	0.0005
TOP	0.010323	0.003326	3.103875	0.0146
C	0.477594	0.226185	2.111523	0.0677
R-squared	0.975584	Mean dependent var	1.905059	
Adjusted R-squared	0.960324	S.D. dependent var	0.449414	
S.E. of regression	0.089518	Akaike info criterion	-1.691220	
Sum squared resid	0.064108	Schwarz criterion	-1.417339	
Log likelihood	17.83854	Hannan-Quinn criter.	-1.716573	
F-statistic	63.93039	Durbin-Watson stat	1.777279	
Prob(F-statistic)	0.000003			

Source: Eviews Output

The Adjusted R-squared of the OLS result is 0.960324, as shown in Table 4.2. This suggests that budget projection, interest rate, exchange rate, trade openness, and inflation rate account for 96% of the variation in purchasing power parity, with the remaining 4% accounted for by factors not included in the model but represented by the error term. The model is statistically significant, as indicated by the F-statistic p-value of 0.000000. Furthermore, the Durbin Watson statistic of 1.777279 shows that the model is free of first order serial correlation. LNBUD has a positive (0.902818) but insignificant (0.3446) effect on PPP. This suggests that for every unit increase in LNBUD, PPP rises by 0.902818 unit. TOP has a positive (0.010323) and significant (0.0146) influence on PPP. This suggests that for every unit increase in TOP, PPP rises by 0.010323 units. Interest rate is positive (0.008907) but insignificant (0.4852) in comparison to the PPP. This means that an increase in interest rates will lead PPP to increase by 0.008907 units. Inflation is negative (-4.631477) and significant (0.0000) in comparison to PPP. This means that an increase in the inflation rate will lead PPP to decline by 4.631477 units. Exchange



rate is negative (0.004145) and significant (0.0005) in comparison to PPP. This means that an increase in the exchange rate will lead PPP to rise by 0.004145 units.

Table 4.3: Ordinary Least Square (OLS) Result

Dependent Variable: PCI

Method: Least Squares

Sample: 2009 2022

Included observations: 14

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNBUD	0.003847	0.006226	0.617859	0.5594
INTR	6.211854	1.657443	3.747853	0.0095
INFL	-0.356177	0.066876	-5.325932	0.0000
EXRT	0.595510	0.170144	3.500034	0.0128
TOP	0.496354	0.225486	2.201259	0.0700
C	18569.80	4561.648	4.070854	0.0036

R-squared	0.886530	Mean dependent var	9.814573
Adjusted R-squared	0.773061	S.D. dependent var	0.088290
S.E. of regression	0.042060	Akaike info criterion	-3.195710
Sum squared resid	0.010614	Schwarz criterion	-2.891507
Log likelihood	27.77212	Hannan-Quinn criter.	-3.258238
F-statistic	7.812939	Durbin-Watson stat	2.345660
Prob(F-statistic)	0.012236		

Source: Eviews Output

The Adjusted R-squared of the OLS result is 0.773061, as shown in Table 4.2. This suggests that budget projection, interest rate, exchange rate, trade openness, and inflation rate account for 77.3% of the variation in per capita income, with the remaining 22.7% accounted for by factors not included in the model but represented by the error term. The model is statistically significant, as indicated by the F-statistic p-value of 0.012236. Furthermore, the Durbin Watson statistic of 2.345660 shows that the model is free of first order serial correlation. LNBUD has a positive (0.003847) but insignificant (0.5594) effect on PCI. This suggests that for every unit increase in LNBUD, PCI rises by 0.003847 units. TOP has a positive (0.496354) but insignificant (0.0700) influence on PCI. This suggests that for every unit increase in TOP, PCI rises by 0.496354 units. Interest rate is positive (6.211854) and significant (0.0095) in comparison to the PCI. This means that an increase in interest rates will lead PCI to increase by 6.211854 units. Inflation is negative (-0.356177) and significant (0.0000) in comparison to PCI. This means that an increase in the inflation rate will lead PCI to decline by 0.356177 units. Exchange rate is positive (0.595510) and significant (0.0128) in comparison to PCI. This means that an increase in the exchange rate will lead PCI to rise by 0.595510 units.



DISCUSSION OF FINDINGS

Purchasing Power Parity

The budgetary projection of Nigeria exhibits a tendency towards the promotion of purchasing power parity, albeit not to a significant extent. The observed correlation between the variables aligns with the anticipated theoretical predictions. The observed positive correlation between budget projections and purchasing power parity is deemed statistically insignificant due to the inadequate execution of the budget, which fails to substantially augment the extant purchasing power of the populace. This phenomenon is attributable to emotional predispositions, malfeasance, and the allocation of a significant portion of the budget towards operational expenses that do not contribute to the country's capital accumulation.

The relationship between interest rates and purchasing power parity is found to be positive but statistically insignificant. This statement suggests that a rise in interest rates could potentially improve the purchasing power parity of individuals in Nigeria. This statement is in opposition to theoretical conjecture. The rationale behind this phenomenon is that as the interest rate rises, there is a greater incentive for individuals to deposit their funds with financial institutions in order to earn a comparatively higher interest yield. The increase in savings yield contributes to the augmentation of the buying capacity of the populace within the nation. The proposition put forth by Kisto (2017) suggests that a reduction in lending institution interest rates can lead to enhanced economic performance. The assertion made by Oloyede and Kolapo (2018) regarding the positive impact of a gradual increase in interest rates on economic performance is deemed inaccurate.

The negative inflation rate holds significant implications for purchasing power parity. The aforementioned implies that an upsurge in inflation possesses the capacity to diminish the purchasing power parity of the populace in Nigeria. This phenomenon occurs due to the positive correlation between inflation rate and the escalation of prices for goods and services, resulting in a depreciation of the purchasing power of currency. In such instances, the effective purchasing power of currency held by individuals is diminished, resulting in a reduction in the quantity of goods and services that can be acquired, thereby leading to a decline in purchasing power parity. The findings of Agwu (2015) and Ayeni (2014) are congruent in demonstrating that inflation has a detrimental impact on economic performance. The assertion made by the user is incongruent with the research conducted by Oloyede and Kolapo (2018), which suggests that inflation has a positive impact on economic performance.

The exchange rate exhibits a positive and statistically significant relationship with the purchasing power parity. When the Nigerian currency experiences an increase in value relative to the United States dollar, there is a corresponding rise in the real purchasing power parity. The depreciation of a nation's currency typically results in a reduction in the value of goods produced in that nation relative to those produced elsewhere. This, in turn, stimulates exports and reduces imports, unless trade barriers, product perishability, or transportation expenses make it feasible for consumers to purchase comparable products from multiple locations. The law of one price is subjected to countrywide levels, as posited by Mishkin and Eakins (2009).

The degree of trade openness has a significant and positive impact on the level of purchasing power parity. The aforementioned proposition posits that an increase in Nigeria's degree of commercial openness is positively correlated with a corresponding increase in the level of



purchasing power parity. This corroborates the theoretical conjecture. The observed phenomenon can be attributed to the increasing globalization of the Nigerian economy, resulting in a greater supply of goods and services and subsequently leading to an augmentation in the purchasing power parity of the Nigerian naira.

Per Capita Income

The budgetary projection of Nigeria exhibits a tendency towards the promotion of per capita income, albeit not to a significant extent. The observed correlation between the variables aligns with the anticipated theoretical predictions. The observed positive correlation between budget projections and purchasing power parity is deemed statistically insignificant due to the inadequate execution of the budget, which fails to substantially augment the extant purchasing power of the populace. This phenomenon is attributable to emotional predispositions, malfeasance, and the allocation of a significant portion of the budget towards operational expenses that do not contribute to the country's capital accumulation.

The interest rate is negative and significant in relation to the GDP per capita. This is consistent with the theoretical postulation that a greater bank lending rate has a tendency to reduce economic development. This is due to banks' high interest rates, which scare away potential investors and cause them to ignore advantageous business options. This reduces economic development through the transmission mechanism because funds cannot flow from the financial sector to the real sector for investment purposes. This is comparable to Oloyede and Kolapo (2018), who argue that lowering lending institutions' interest rates boosts economic performance. However, Kisto (2017) is incorrect in claiming that a steady rise in interest rates boosts economic performance.

The inflation rate is negative and substantial in relation to the PCI. This is consistent with the theoretical postulation that greater inflation rates tend to slow economic progress. This is due to the fact that an increase in the general costs of products and services erodes the purchasing power of consumers, who will be unable to command more purchases, resulting in a drop in economic development. This is consistent with Agwu (2015) and Ayeni's (2014) findings that inflation impedes economic performance. In contrast, Oloyede and Kolapo (2018) study suggests that inflation boosts economic performance.

The exchange rate exhibits a positive and statistically significant relationship with per capita income. When the Nigerian currency experiences an increase in value relative to the United States dollar, there is a corresponding rise in the per capita income. The depreciation of a nation's currency typically results in a reduction in the value of goods produced in that nation relative to those produced elsewhere. This, in turn, stimulates exports and reduces imports, unless trade barriers, product perishability, or transportation expenses make it feasible for consumers to purchase comparable products from multiple locations. The law of one price is subjected to countrywide levels, as posited by Mishkin and Eakins (2009).

The degree of trade openness has an insignificant and positive impact on per capita income. The aforementioned proposition posits that an increase in Nigeria's degree of trade openness is positively correlated with a corresponding increase in her per capita income. This corroborates the theoretical conjecture in terms of the relationship but it is insignificant.



CONCLUSION AND RECOMMENDATIONS

Conclusion

The study focused on investigating the impact of Nigeria's budget, exchange rates, trade openness, inflation rates, and interest rates on the purchasing power parity (PPP) and per capita income (PCI). The research employed descriptive statistics and ordinary least squares (OLS) regression analysis at a significance level of 5%. Based on the findings, it was revealed that inflation rates, exchange rates, and trade openness were primary determinants affecting the PPP and PCI in Nigeria. The study observed that higher inflation rates were associated with a decrease in both the PPP and PCI, indicating a loss of purchasing power for consumers and a decline in the country's overall income levels. Similarly, fluctuations in exchange rates negatively impacted the PPP and PCI, as a depreciation in the national currency reduced its purchasing power in international markets. Furthermore, the research highlighted that increased trade openness was beneficial to both the PPP and PCI in Nigeria. Trade openness promotes economic efficiency, fosters competition, and enhances productivity, ultimately leading to an increase in purchasing power and per capita income. The study concluded that a more open trade policy would be advantageous for Nigeria's economic growth and development. The findings emphasized the significance of managing inflation rates, exchange rates, and promoting trade openness as vital factors for sustaining economic stability, enhancing purchasing power, and improving per capita income in Nigeria. Policymakers should take the research findings into account when formulating strategies to promote economic growth and development in Nigeria.

Recommendations

Purchasing Power Parity (PPP)

1. Implement effective inflation control measures: Given the negative relationship between inflation rates and PPP, it is crucial for policymakers to focus on implementing measures to control inflation. This may involve adopting tight monetary policies, strengthening fiscal discipline, and promoting price stability through effective coordination between the central bank, government, and relevant stakeholders.

2. Promote exchange rate stability: Fluctuations in exchange rates can significantly impact PPP in Nigeria. To mitigate this, it is recommended to pursue exchange rate policies that aim for stability, such as a managed float or a fixed exchange rate regime. Enhancing forex market liquidity, attracting foreign investments, and fostering economic diversification can also contribute to exchange rate stability.

3. Facilitate trade openness: The study highlighted the positive relationship between trade openness and PPP. To leverage this potential, policymakers should focus on promoting trade liberalization, reducing trade barriers, and enhancing the ease of doing business. Encouraging foreign direct investment (FDI) and the development of competitive industries can contribute to increased export competitiveness, enhance productivity, and improve the country's PPP.

4. Enhance data collection and analysis: To ensure informed decision-making, it is essential to strengthen data collection and analysis mechanisms. Timely, accurate, and comprehensive data on key economic factors such as inflation, exchange rates, trade, and PPP are crucial for



policymakers and researchers. Investing in data infrastructure and improving statistical capacity will support effective policy formulation and evaluation.

5. Foster collaboration and policy coordination: Addressing the determinants impacting PPP requires a collaborative approach involving multiple stakeholders. Policymakers, central bank authorities, trade regulatory agencies, and other relevant institutions should work together to develop comprehensive strategies that integrate measures to control inflation, stabilize exchange rates, and promote trade openness. Regular consultations, coordinated policy actions, and information sharing among these entities will be key to achieving desired outcomes.

Per Capita Income (PCI)

1. Implement effective inflation control measures: Given the negative relationship between inflation rates and PCI, it is crucial for policymakers to focus on implementing measures to control inflation. This may involve adopting tight monetary policies, such as adjusting interest rates, to curb inflationary pressures. Additionally, targeted fiscal policies should be implemented to address the root causes of inflation, such as improving infrastructure, promoting agricultural productivity, and reducing reliance on imports.

2. Maintain exchange rate stability: Fluctuations in exchange rates can significantly impact PCI in Nigeria. To mitigate this, policymakers should aim for exchange rate stability through appropriate policies and interventions. This can include managing exchange rate movements through a combination of prudent monetary and fiscal policies, such as intervening in the foreign exchange market to avoid extreme exchange rate fluctuations and promoting foreign exchange reserve management.

3. Promote trade openness and economic diversification: The study emphasized the positive relationship between trade openness and PCI. To leverage this potential, policymakers should prioritize trade liberalization, reduction of trade barriers, and facilitation of international trade. Additionally, efforts to diversify the economy by promoting non-oil sectors and increasing value-added exports can contribute to higher PCI. This can be achieved through targeted policies to stimulate private sector investment, innovation, and entrepreneurship in new industries.

4. Enhance human capital development: Investing in education, healthcare, and skills development is crucial to improving PCI. By prioritizing human capital, policymakers can enhance productive capacities, increase labor market participation, and promote overall economic growth. Strategies such as improving access to quality education, expanding vocational training programs, and investing in healthcare infrastructure can significantly impact PCI in Nigeria.

5. Strengthen data collection and analysis: To ensure informed decision-making, it is essential to strengthen data collection and analysis mechanisms related to key economic factors affecting PCI. Policymakers should invest in improving data infrastructure, enhance statistical capacity, and undertake regular surveys to collect comprehensive and reliable data on income levels, employment, and other relevant indicators. This will facilitate evidence-based policy formulation and evaluation.

By implementing these recommendations, Nigeria can take steps towards improving its purchasing power parity (PPP) and per capita income (PCI), fostering economic stability, and



ultimately enhancing the purchasing power parity (PPP) and per capita income (PCI) of its citizens. Continuous monitoring, evaluation, and adjustment of policies are essential to ensure their effectiveness in achieving sustainable economic growth and development.

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