

The Inflation- Growth Nexus: Investigating the Complex Interplay between Inflation, *Economic Growth*, and *Development in Emerging Economies*

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1. Introduction

The primary objective of every country regardless of their level of economic development is to ensure relative price stability via a well disciplined inflation rate (Idris and Bakar, 2017). A sound and productive level of inflation is certainly regarded as a good outcome of fiscal prudence and essential criteria for the attainment of a sustainable level of growth and development.

Inflation can be defined as a sustained rise in the general price level of goods and services in an economy over time leading to a decline in the purchasing power of money. It is a macroeconomic variable that affects all aspects of economic life. Inflation is usually measured by the consumer price index. It is useful to note that while a moderate level of inflation is usually considered necessary for a healthy economy, high levels of inflation can have severe consequences which can lead to economic instability, decrease in investment and declining purchasing power.

Economic growth which is measured by the gross domestic product (GDP) is a key indicator of a country's economic health and development. It is the total monetary value of all final goods and services produced within the country during a specific period, usually a year. Sustainable economic growth is important for job creation, poverty reduction and improved living standards. Economic growth is measured by the gross domestic product (GDP).

Economic development is the process of improving the overall well-being and quality of life for a community or country often through activities aimed at increasing economic activity, job creation and resource allocation. It involves both quantitative growth (like GDP increases) and qualitative changes (like

improvements in education and healthcare). it can be measured via many indices such as GDP/ GNP, population growth, occupation structure of the labor force, energy consumption per capita, life expectancy, quality of life and the human development index (HDI).

The relationship between inflation and economic growth has been debated among economists and policy makers for many years. The traditional view, based on the Phillips curve is that there is a trade-off between inflation and unemployment which suggests that in the short run, higher inflation is associated with lower unemployment and and higher economic growth. However this postulation has been challenged severally over time by empirical evidence, especially in the long run, where high levels of inflation has been found to have a negative effect on economic growth.

Emerging economies are often characterized by rapid growth, industrialization and increasing integration into the global economy and they face unique challenges and opportunities in managing inflation and fostering sustainable economic growth. These countries have to combat structural issues like underdeveloped financial markets, weak institutions and vulnerability to external shocks which can further make complex the inflation- growth nexus.

2. Theoretical Framework

The relationship between inflation and economic growth has been explained by many economic theories such as the Classical, Neoclassical, Keynesian, Monetarist and Endogenous growth theories among others. These theories have explained the nature of the relationship from their various perspectives.

The Classical economists believe that money is neutral and affects only nominal variables such as prices, without necessarily having any real impact on output or economic growth, thus inflation has no long -run effect on economic growth.

The Neoclassical perspective on inflation and growth generally emphasizes a long-term focus on stable economic conditions, low

inflation and efficient resource allocation. They believe that a stable economic environment with a low inflation rate fosters long-term growth and optimal investment

The Keynesian economists propose that in the short run, inflation can encourage economic growth by reducing real interest rates, which stimulates investment and consumption. However over time, high inflation can lead to uncertainty and reduce investment, thereby hindering economic growth.

The monetarist economists led by Milton Friedman of the Chicago School of Economics, argued that inflation is primarily a monetary concept and that excessive growth in the money supply is what causes inflation. They assert that high inflation is adverse to economic growth as it creates uncertainty, distorts prices, and reduces the efficiency of resource allocation.

The Endogenous Growth theorists incorporate the role of technological progress, human capital accumulation, and innovation in driving long-term economic growth. Some endogenous growth models indicate that inflation can have a negative impact on growth by reducing investment in research and development and hindering technological progress

3. Review of Literature

A review of the empirical literature presents an inconclusive picture of the inflation-growth nexus with studies revealing different results depending on the country, time period and methodology used. While some studies such as, Wai (1959), Bhatia (1960), Dorrance (1963), Johansen (1967), Mallik and Chowdhury (2001) have found a positive relationship between inflation and economic growth. These studies particularly in the 1950s and early 2000s found a positive relationship particularly at lower levels of inflation. These studies point to the "Tobin effect" where moderate inflation can stimulate investment and economic activity. Sarel (1996), Khan and Senhadji (2001), and Drukker et al. investigated the threshold effect and found that the relationship between inflation and economic growth can become negative at certain inflation levels. Doguwa (2012) also detected a threshold level for Nigeria. Thus it is important to note that the relationship can become

negative at higher inflation rates. This paper also discovered a threshold level for inflation in Nigeria.

Many others such as, Fischer (1993), Barro (1996), Bruno and Easterly (1998), Ghosh and Phillips (1998), Khan and Senhadji (2001) and Iqbal and Nawaz (2009), Jayathilake and Rathnayake (2013), Bassey and Onwioduokit (2011) among others have found a negative relationship between inflation and economic growth especially when inflation exceeds a certain threshold. These studies show that high and volatile inflation can hinder long-term economic development in the long term. Kirsanli (2022) while considering the impact of inflation on economic growth in 38 Organization for Economic Cooperation and Development (OECD) countries from 1971 to 2021 found that inflation harms the economic growth with various specifications using the generalized method of moments (GMM) to overcome endogeneity and reverse causality issues. It was discovered that a one percent increase in inflation reduces growth by between 0.03% to 0.15%. Idris and Bakar (2017) considered the relationship between inflation and economic growth in Nigeria and the study concluded that the inflationary trend in Nigeria is negatively affecting the realization of sustainable growth and development.

A growing set of research, such as, Burdekin (2000) and Li (2005), have also suggested that the inflation- growth nexus is non- linear. That is the impact of inflation on growth can reverse at higher inflation rates. Cooray (2013) considered the case of Sri Lanka and this study though admitting the Neoclassical view that there is a negative linear relationship between inflation and economic growth found a non- linear relationship for these variables. Growth improved with inflation showing a positive relationship up to 11% of inflation and then became negative at higher rates of inflation. Thus there is a significant structural break in inflation at the 12 % level.

Further studies such as Yussuff (2021) on the effect of inflation on economic growth in Nigeria for the period 1990 to 2016 based on data obtained from the Central Bank of Nigeria (CBN) publications revealed that inflation did not have significant effect on economic growth during the period. The study also found that inflation is not significant in explaining the changes in economic growth over the period.

The larger proportion of studies that found a negative relationship between inflation and economic growth in the long run suggest that high inflation decreases investment, lowers productivity and creates an unstable macroeconomic environment which hinders economic growth.

4 Inflation, Economic Growth and Development in Nigeria and the BRICS

Inflation rates over the past three decades in Nigeria has been on the increase which has engendered a lot of uncertainty in the macroeconomic management of Nigeria, in addition to a decline in the welfare of the society and economic efficiency. This was mainly due to the general drop in oil prices in the 1980s leading to lower revenue generation. The public sector over this period has had to borrow in order for government to carry out its recurrent and capital expenditure programs (Idris and Bakar, 2017). Private investors do not have incentives to participate in economic activities when the resultant inflation figure is high and this undermines the prospects of output growth in the economy (Erbaykal and Okuyan, 2008).

In the contrary for the BRICS countries, Behera and Mishra (2016) observed a long run positive relationship between inflation and economic growth for China and South Africa at the 5% level of significance. They also found a unidirectional causality between economic growth and inflation for India and bidirectional causality for China.

Figure 1 reveals the measure of economic development which is the human development index (HDI) for Nigeria and the BRICS nations. Figure 2 shows the trend in inflation for the six countries while figure 3 is the trend in economic growth (GDP).

A close examination of figure 1 which is the trend in human development index reveals a general upward trend for Nigeria, Brazil, Russia and China. India and South Africa displayed an uneven trend. Figure 2 shows that Nigeria, India, China and South Africa had fluctuating trends in inflation while Brazil and Russia had a relatively more stable trend. Figure 3 is the trend in the

gross domestic product and this showed undulating trend for all the six emerging countries under consideration.

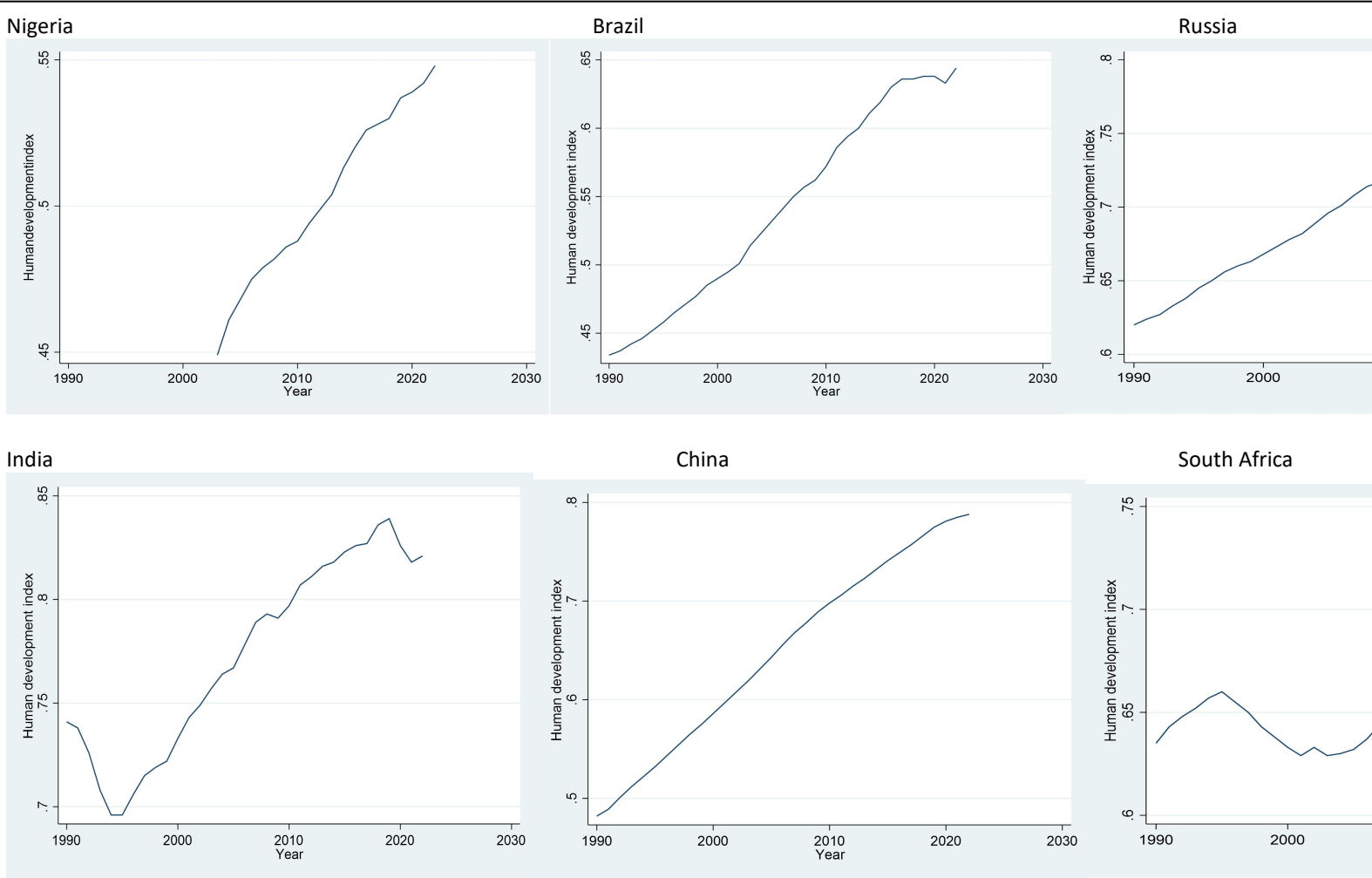
Many countries experiencing the challenge of rising inflation feel its effect on productive decision making by individual investment and gradual erosion of economic and social welfare which over time leads to lower output growth. High inflation adversely affects the realization of sustainable growth and development. The challenges of inflation can be contingent on many scenarios. Changes in consumption pattern maybe impending in any given situation where an increased set of prices are chasing similar bundle of goods and services over an extended period of time, while the real consumer income remains unchanged. This , however not only produces an insignificant effect on consumption capacity and social welfare but further largely affects the sustainable rate of economic growth in the long run through reduction in savings and investment, heightened poverty indices, and reduces the international competitive drive of the economy. An increased and unstable inflation rate that is difficult to predict, causes a short- term contract arrangement between the workers and employers, which may result to uneconomical renegotiation in the future. Other problems associated with is the depreciation in the local currency which relatively affects the exportable commodities and intensifies the growing balance of payment deficit.

The rising inflationary regimes affect the decision making and other organizational business plans based on the available data. Although this may depend on organizational size, the scale of operations , types of business formation, and the region of business. Any meaningful attempts to subdue the effects of sustained inflation will be made only when the inflationary trend is not spiral but low. Otherwise, it will impose great challenges on productive activities designed towards market- driven growth or other economic policy for national sovereignty. An essential reason to curtail the rising trend of inflation is to avoid reaching a point where the adverse effects may be difficult to manage. More so the overall effect will increase the speed of getting to recession. The problems that inflation brings are not restricted to specific regions or to transition or emerging economies alone but is also a challenge to developed countries especially in the aftermath of the Covid-19 pandemic. The additional challenges posed by sustained high prices affects the development of the financial sector,

increases growth inequality and income distribution, encourages uncertainty in the macroeconomic management , heightens social cost among the citizens and greatly affects the aggregate output growth in the domestic economy.

Further more the sustained Increase in inflation rates will produce negative effects on the real interest rate especially when the nominal rate of interest are fixed. Thus returns on financial asset maybe negative and will discourage stakeholders and other prospective investors. As a result, demand for a productive financial asset with high potential savings will ultimately reduce. As the prospective investors fully become aware of the effects and challenges of sustained inflation through a decline in the value of dividends , they will rationally change their investment decisions to other domain of productivity whose returns provide a hedge against inflationary trend. As a result the demand for loan-able funds in the financial sector (commercial banks) will decrease and thus , affect the tempo of economic activities, growth of consumer income and the aggregate national income. Another dimension of the negative effects of inflation is the impact on the domestic cost of production which virtually dampens investment decisions in the economy thus giving more need for importation of commodities and capital flight at the cost of export which should have been produced locally to avoid the undesirable effects on the current account balance especially the non-oil goods. The disposable income of the growing population will also reduce in value which may lead to labour unions requesting for higher wages and salaries especially in the health and education sectors, which have implications for human capital development. All of these effects will further hinder the ability of the country (ies) to attain sustainable levels of growth. Asides human development , the growth of capital formation is also constrained by the inflationary pressure which is required for effective distribution to capital and money markets for competitive utilization with the view of ensuring a balanced growth in the economy. Every economy must invest a sizeable amount of capital stock into productive ventures if they are to develop thus capital formation is an essential requirement for macroeconomic growth and development.

Figure 1:Trend Analysis Economic Development (Human



Development Index, HDI)

Source: Author's Compilation

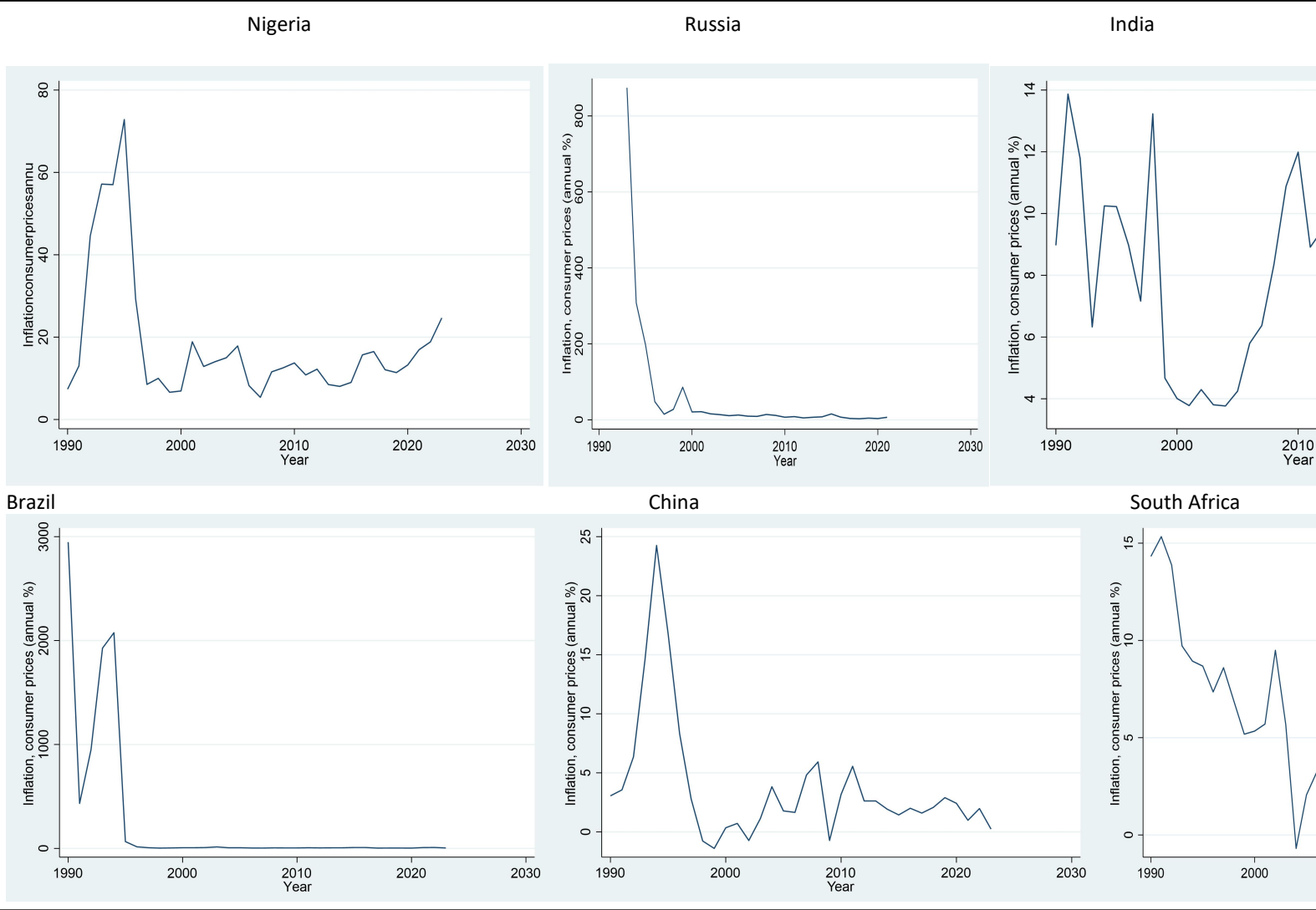
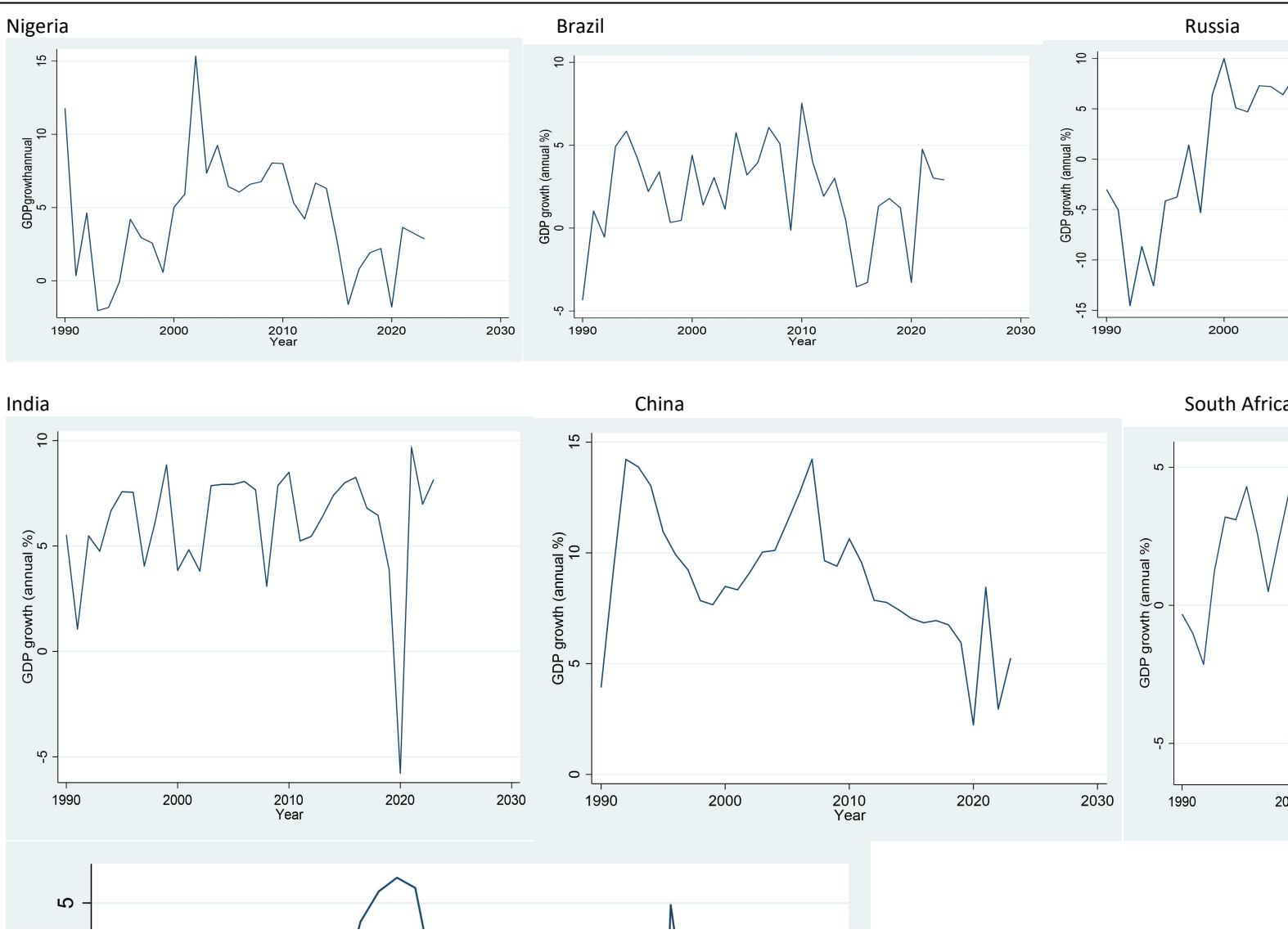


Figure 2: Trend Analysis Inflation Rate for Nigeria and BRICS

Source: Author's Compilation, using data from world development indicators (WDI)

Figure 3: Trend Analysis, Economic Growth(GDP)



Source: Author's Compilation

Further inferential analysis using the GDP and HDI as dependent variables showed that inflation is negatively related to economic growth and is significant (see results in tables 1 and 2). Likewise there exists a threshold for these emerging countries (see results in tables 3 and 4).

Table 1

VARIABLES	(Brics) FE HDI	(Brics) FE GDP growth	(Nigeria) OLS HDI	(Nigeria) OLS GDP growth
Inflation consumer prices annu	-0.000119*** (2.50e-05)	-0.0158*** (0.00336)	-0.000217 (0.000468)	0.121 (0.165)
Gross fixed capital formation	0.00247*** (0.000718)	-0.0227 (0.0966)	-0.00169*** (0.000356)	0.223 (0.133)
Trade of GDP	-0.000232 (0.000360)	0.101** (0.0483)	0.000176 (0.000226)	0.00202 (0.0773)
General government final consumption	-0.00210 (0.00218)	-1.484*** (0.293)	0.000310 (0.000920)	-0.177 (0.499)
Population growth annual	-0.0145** (0.00720)	-0.120 (0.960)	-0.111*** (0.0109)	15.98*** (3.008)
School enrollment secondary	0.00376*** (0.000245)	-0.0292 (0.0326)	0.000603* (0.000299)	0.194 (0.125)
Constant	0.357*** (0.0341)	26.40*** (4.562)	0.794*** (0.0391)	-49.71*** (14.28)
Observations	112	113	16	21
R-squared	0.876	0.443	0.973	0.533
Number of ID	5	5		
Hausman	chi2(6) = 652.50 Prob > chi2 =		chi2(6) =	Breusch– Breusch–

0.0000	= 76.42 Prob > chi2 = 0.0000	Pagan/Cook– Weisberg test for heteroskedasticity H0: Constant variance	Pagan/Cook –Weisberg test for heteroskedas- ticity
		chi2(1) = 1.95 Prob > chi2 = 0.1630	H0: Constant variance
			chi2(1) = 0.25 Prob > chi2 = 0.6146

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

NB: FE represents fixed effects and OLS represents ordinary least square regression

Table 2: Threshold effect test: Dependent variable GDP Growth rate (Brics)

	Threshold Variable: Inflation		
Threshold	Threshol d	Lower	Upper
Th-1 (Single)	307.7226	24.257 0	653.516 2
$H_0 = \beta_1 = \beta_2$ (Linear model)	17.59 (0.0333)		

$H_a = \beta_1 \neq \beta_2$ (Single threshold model)	
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Note: F-statistic reported for hypothesis test with p-value in bracket

Table 3 shows that the single-threshold model estimator is 307.7226 , with a 95% confidence interval. The F-statistic is significant, leading us to not reject the single-threshold model. This result suggests that there is a threshold effect of inflation on GDP growth. That is inflation exhibit an inverted U-shaped or non-linear relationship with GDP growth.

Table 1: Threshold effect test: Dependent variable HDI (Brics)

	Threshold Variable: Inflation		
Threshold	Threshol d	Lower	Upper
Th-1 (Single)	2.6211	2.3472	2.7865
$H_0 = \beta_1 = \beta_2$ (Linear model) $H_a = \beta_1 \neq \beta_2$ (Single threshold model)	23.68 (0.1267)		

Note: F-statistic reported for hypothesis test with p-value in bracket

Table 3 shows that the single-threshold model estimator is 2.6211, with a 95% confidence interval. The F-statistic is insignificant, leading us to not accept the single-threshold model. This result suggests that there is no threshold effect of inflation on the HDI. That is inflation does not exhibit an inverted U-shaped or non-linear relationship with GDP growth.

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Nigeria

Table 3: Threshold effect test: Dependent variable HDI (Nigeria)

Order	Threshold	SSR
1	14.998	0.0148

Humandevelopmentindex	Coefficient	Std. err.	z	P>z	[95% conf.	interva
Humandevelopmentindex						
Inflationconsumerpricesan nu	-0.00036	0.000323	-1.12	0.263	-0.001	0.000
Region1						
_cons	0.502884	0.005767	87.2	0	0.49158 1	0.514
Region2						
_cons	0.523084	0.012258	42.67	0	0.49906	0.547

The output consists of two tables. The first table reports the estimated threshold and the corresponding SSR. The column labeled Order ranks the order in which the threshold was estimated. The order of 1 corresponds to the threshold value that contributes most in minimizing the SSR. The estimated threshold of 14.998 % splits the sample into two regions. Region1 corresponds to the portion of the sample in which the HDI is less than or equal to the threshold value. Region2 corresponds to the portion of the sample in which the HDI is greater than the threshold value.

Since the coefficient in both region are approximately equal, it means there is no threshold effect of inflation on HDI

Table 4: Threshold effect test: Dependent variable GDP Growth (Nigeria)

Order	Threshold	SSR
1	14.998	401.9447

GDPgrowthannual	Coefficient	Std. err.	z	P>z	[95% conf.	interval
GDPgrowthannual						
Inflationconsumerpricesannu	-0.07021	0.0532	-1.32	0.187	-0.17448	0.03405
Region1						
_cons	6.108088	0.949658	6.43	0	4.246792	7.96938
Region2						
_cons	4.467662	2.018494	2.21	0.027	0.511486	8.42383

The output consists of two tables. The first table reports the estimated threshold and the corresponding SSR. The column labeled Order ranks the order in which the threshold was estimated. The order of 1 corresponds to the threshold value that contributes most in minimizing the SSR. The estimated threshold of 14.998 % splits the sample into two regions. Region1 corresponds to the portion of the sample in which the HDI is less than or equal to the threshold value. Region2 corresponds to the portion of the sample in which the HDI is greater than the threshold value.

Since the coefficient in both region differs, it means there is a threshold effect of inflation on GDP growth

Overall the results indicate the existence of a threshold effect of inflation on GDP growth in Bricks and in Nigeria

The empirical findings of the study indicate that there is a long run positive relationship between inflation and economic growth only for China and South Africa at the 5 percent level of significance.

Key Findings: Inflation and Economic Growth in Emerging Economies

Emerging economies are faced with peculiar challenges and opportunities in managing inflation and fostering sustainable economic growth and development. These economies are usually characterized by structural issues, vulnerability to external shocks,

rapid growth and industrialization, monetary and fiscal policy challenges

Structural issues such as underdeveloped financial markets, weak institutions and inadequate infrastructure can make it more cumbersome to control inflation and promote economic growth. Furthermore emerging economies are usually more susceptible to external shocks such as changes in commodity prices, capital flows and global economic conditions which can lead to inflationary pressures and hinder growth.

The rapid growth and industrialization feature of emerging economies can lead to increased demand for goods and services which can put pressure on prices and which can lead to inflation. Also emerging economies face challenges in implementing monetary and fiscal policy to combat inflation due to limited policy credibility, weak institutions and political limitations.

In spite of these challenges, many emerging economies have achieved substantial success in managing inflation and fostering high rates of economic growth. This success can be attributed to the following factors:

I. improved Monetary policy frameworks whereby these countries adopt inflation targeting which has helped to enhance policy credibility and anchor inflation expectations

II. Structural reforms such as financial sector liberalization, trade liberalization and privatization which have helped to improve the efficiency of resource allocation and promote economic growth

III. Increased integration into the global economy has made it possible for emerging economies to have access to new markets, technologies and capital which boost economic growth

Recommendations :Policy Implications of the Inflation-Growth Nexus

There are a number of policy implications on the nexus between inflation and economic growth from research as follows:

i. Maintenance of Price Stability: policymakers in emerging economies should give priority to maintaining price stability by keeping inflation at a moderate level. This can be achieved via sound monetary and fiscal reforms as well as through structural reforms to improve the functioning of the markets.

ii. Promotion of Structural reforms which are essential for improving the efficiency of resource allocation, enhance productivity and promote long term economic growth. These

reforms may include financial sector liberalization, trade liberalization, privatization and improvements in infrastructure and education.

iii. There is a need to strengthen institutions which are essential for creating a stable macroeconomic environment, attract investment and promote sustainable economic growth. Emerging economies should focus on strengthening their legal systems , regulatory frameworks and governance structures.

iv. Emerging economies should take steps to manage their vulnerability to external shocks, such as diversifying their economies, building up foreign exchange reserves and implementing sound macroeconomic policies

Conclusion

The relationship between inflation and economic growth is complex and multifaceted, especially in the context of emerging economies. While high inflation is generally bad and is a disadvantage for long-term economic growth, a moderate level of inflation maybe compatible with economic growth. Emerging economies face unique challenges in managing inflation and promoting sustainable economic growth due to structural issues, vulnerability to external shocks as well as the complexities of rapid growth and industrialization. However by implementing sound macroeconomic policies, promoting structural reforms and strengthening institutions, emerging economies can successfully manage inflation and achieve high rates of economic growth which leads to improved living standards and sustainable development.

References

Barro , R.J. (1996). Inflation and Economic Growth. NBER Working Paper Series No.5326

- Bassey, G.E. and Onwioduokit, E.A. (2011). An Analysis of the Threshold Effects of Inflation on Economic Growth in Nigeria. *WAIFEM Review* Vol.8 No.2
- Behera, J. and Mishra, A.K. (2016). Inflation and Economic Growth Nexus in BRICS: Evidence from ARDL Bound Testing Approach. *Asian Journal of Economic Modelling* AJESS Vol.4 No.1
- Bruno, M. and Easterly, W. (1998). Inflation Crisis and Long Run Growth. *Journal of Monetary Economics*. Vol.41
- Burdekin, R.C.K. (2000). When does Inflation Hurt Economic Growth? Different Nonlinearities for Different Economies. *Working Papers in Economics*. Claremont Colleges, August
- Cooray, N.S. (2013). An Empirical Analysis of Inflation- Growth Nexus in Developing Countries: The Case of Sri Lanka. *Economic and Management Series* 2013- 21
- Doguwa, S.I. (2012). Inflation and Economic Growth in Nigeria: Detecting the Threshold Level. *CBN Journal of Applied Statistics* Vol.3 No.2
- Drukker, D., Gomis-Porqueras, P. and Hernandez- Verme, P. (2005). Threshold Effects in the Relationship Inflation and Growth: A New Panel- Data Approach. <http://www.uh.edu/~cmurray/TCE/papers/Drukker.pdf>
- Fischer, S. (1993). The Role of Macroeconomic Factors in Economic Growth. *Journal of Monetary Economics*, 32:485-512
- Ghosh, A. and Phillips S. (1998). Warning: Inflation May Be Harmful to Your Growth. *IMF Staff Papers*, 45(4)
- Idris, M. and Bakar, R. (2017). The relationship between Inflation and Economic Growth in Nigeria: A Conceptual Approach. *Asian Research Journal of Arts and Social Sciences*, 3(1):1-15
- Jayathileke, P.M.B. and Rathnayake, R.M.K.T. (2013). Testing the Link between Inflation and Economic Growth: Evidence from Asia. *Modern Economy*, 04(02), 87-92
- Johansen, H.G.. (1967). Is Inflation a Retarding Factor in Economic Growth? In *Fiscal and Monetary Problems in Developing States*, Proceedings of the Third Rehorothe Conference, ed. By David Krivine

- Khan, M.S. and Senhadji, A.S. (2001). Threshold Effects in the Relationship between Inflation and Growth. IMF Staff Papers, 48
- Kirsanli, F. (2023). Inflation- Economic Growth Nexus: Evidence from OECD Countries. Journal of Emerging Economies and Policy. <https://ssrn.com/abstract=4619045>
- Li, M. (2005), Inflation and Economic Growth: Threshold Effects and Transmission Mechanism. Department of Economics, University of Alberta, Canada (Mimeograph)
- Mallik, G. and Chowdhury, A. (2001). Inflation and Economic Growth: Evidence from Four South Asian Countries. Asia- Pacific Development Journal 8(1), 123-135
- Yussuff, R.O. (2021). The Effects of Inflation on Economic Growth in Nigeria. International Journal of Innovative Research & Development. Vol.10 Issue 6, June. <https://doi.org/10.24940/ijird/2021/v10/i6/JUN21052>
- Wai, U.T. (1959). The Relationship between Inflation and Economic Development: A Statistical Inductive Study. IMF Staff Papers, 7:302-317