



INFLATION DYNAMICS AND ECONOMIC GROWTH IN DEVELOPING ECONOMIES: EVIDENCE FROM KENYA, NIGERIA, ETHIOPIA, AND GHANA (2008–2024)

Stephen A. Orina¹ Dr. Yasin Ghabon²

¹*School of Business & Economics, Finance Department, Maseno University.*

²*School of Business & Economics, Economics Department, Maseno University.*

ABSTRACT

The paper explores the dynamics of inflation, and its association with economic growth in four of the African developing economies- Kenya, Nigeria, Ethiopia and Ghana, during the period of 2008-2024. The work combines qualitative research with the descriptive data using Monetarist and Keynesian but then moving on to Structuralist, Threshold and Open- economy theories. Through the World Bank annual CPI data and annual reports by the central banks, the paper demonstrates that inflation in such economies is multidimensional and it can be assessed with regard to the news on growth in monetary, fiscal deficit factors, exchange-rate pass-through factors, supply and global commodity shock bottlenecks. Comparative country experience suggests that there were substantial divergences: Kenya had been fairly stable under an inflation-targeting regime, and Nigeria had continuously high inflation rates due to fiscal dominance and exchange-rate instability. Ethiopia had extreme volatility in regards to agricultural boundaries and political interference and Ghana had extremely high inflation that was mainly as a result of currency depreciation and fiscal pressure. The conceptual framework developed demonstrates how these drivers are inputs to the inflation dynamics-quantified in level, volatility, and persistence- and how they impact growth through those channels as investment, consumption, competitiveness, and financial stability. The paper concludes that moderate inflation is compatible with growth, whereas the high double-digit or volatile inflation will harm the macroeconomic stability. Policy prescriptions emphasize monetary credibility, fiscal discipline, structural reforms and selective social protection.

KEYWORDS: *Inflation dynamics; Economic growth; Developing economies; Fiscal policy*

1. INTRODUCTION

Two of the most significant macro-economic management goals are inflation and economic growth, particularly the developing economies. According to World Bank (2024), developing economies are characterized by low-to-middle per capita incomes, dependence on the primary commodities, inadequate institutional support, and large vulnerability to local and external shocks. Unlike the advanced countries, which benefit the advantage of good monetary policy and diversified manufacturing base, the developing countries tend to bear the pressure of inflationary forces due to the changes in price of food and energy, deflation of exchange rates, political imbalance, and structural bottlenecks in supply (IMF, 2023).

Inflation-growth relationship is a complex one; it has been a contentious subject in writing economic literature. Moderate inflation can, on the one hand, lower the real debt burden, stimulate investment and indicate growing demand (Sarel, 1996; Khan and Senhadji, 2001). Conversely, unstable inflation in the form of persistent double-digit or volatile inflation destroys purchasing power, discourages savings, distorts relative prices, and undermines the confidence in the management of macroeconomic policy (Friedman, 1968). Historical records indicate that over inflation levels of 10-15, especially in the developing economies is a growth killer (Khan and Senhadji, 2001).

These dynamics can be depicted by recent data in Sub-Saharan Africa. During the years 2008, the Central Bank of Kenya adopted an inflation-targeting framework that stabilized the inflation rate in Kenya to under 10% after the inflation rate had hit 26% in 2008 due to the food and fuel shocks (World Bank, 2024). Inflation in Nigeria has continued to be high with an increase in the inflation rate to more than 33.0% in 2024 due to exchange-rate pressures, subsidy eliminations, and fiscal dominance (Central Bank of Nigeria, 2024). Ethiopia was highly volatile and the inflation was 44 percent in 2008 and more than 30 percent in 2022 because of conflict-related shocks and agricultural bottlenecks (National Bank of Ethiopia, 2023). By 2019, inflation in Ghana had declined to single-digits, but in 2023, it has soared to 38 percent after the currency weakened and the economy experienced fiscal pressure (Bank of Ghana, 2023).

Figure 1 shows the CPI inflation rates in the four economies on an annual basis between the years 2008 and 2024. The chart indicates a high volatility and cross-country variation with Ethiopia and Ghana registering a steep movement compared to Kenya which has a comparatively steady curve. The long-term positive trend in Nigeria takes the form of structural fiscal and exchange-rate imbalance.

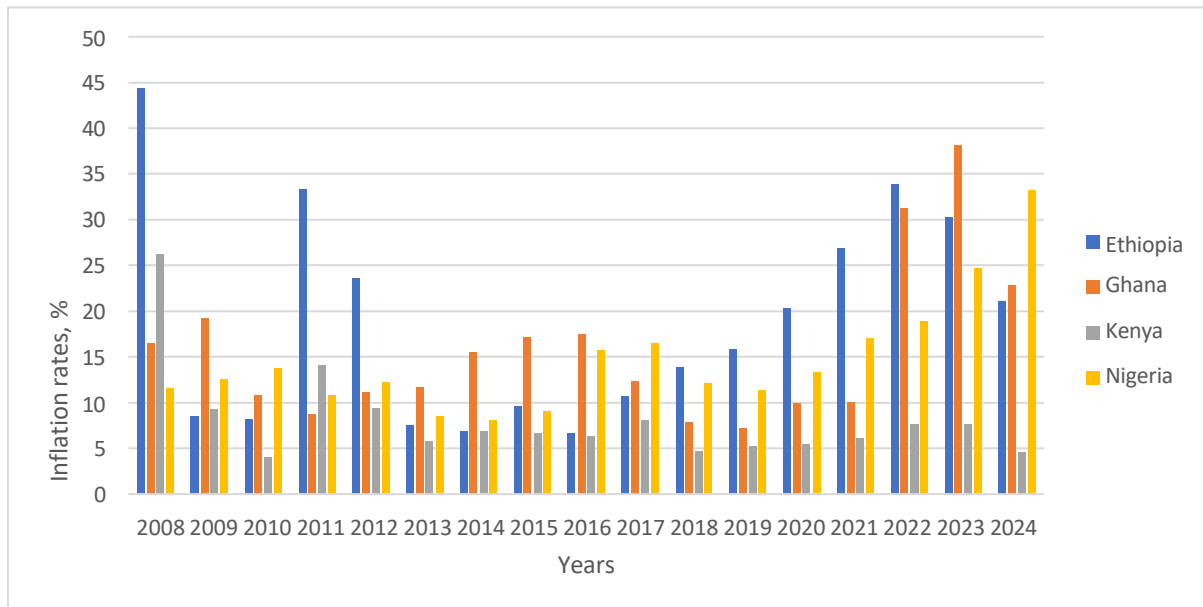


Figure 1: The annual inflation rates in Ethiopia, Ghana, Kenya and Nigeria (2008-2024). Source: World Bank (2024).

These experiences highlight the point that inflation on the African economies is not merely a financial dilemma but a multipolar dilemma which is determined by the fiscal policy, structural inflexibility and global shocks. It gives the policymaker a twofold dilemma of continuing to grow and at the same time maintain stability in prices. The importance of such a balance can be explained by the fact that African Development Bank (2023) explains that chronic inflation may undermine the success of poverty reduction and long-term development views.

It is with this background that the current paper will focus on how inflation dynamics and economic growth have interacted in Kenya, Nigeria, Ethiopia and Ghana between 2008 and 2024. It relies on the theoretical views, summarizes the empirical evidence, and discusses the descriptive data of inflation. A theoretical framework is shown to bring out the transmission mechanisms by which inflation influences the growth outcomes. The study offers some insights to the wider discussions on price stability, growth and development in the Global South by examining the four representative African economies.

2. LITERATURE REVIEW

The correlation between the inflation process and economic growth has always been a debatable issue in macroeconomic studies, particularly in the developing economies where inflationary forces are frequent and severe. This chapter examines the key theoretical viewpoints and empirical literature, and particularly focuses on the Sub-Saharan Africa as well as other developing setting.

2.1 Theoretical Perspectives

According to the Monetarist school, Friedman (1968) states that inflation is always and everywhere a monetary phenomenon. As it is said in the quantity theory of money ($MV = PY$) continuous money supply growth would necessarily lead to higher price level unless it was accompanied by the corresponding growth in output. It is based on this theory that the central bank plays a central role in ensuring that the price remains stable through monitoring money growth. Although this method has been successful in developed economies, its explanatory capacity is less in developing economies wherein monetary policy is complicated by fiscal dominance and per inflexible supply sides.

The Keynesian/Phillips curve tradition emphasizes the short-run trade off between inflation and unemployment. Keynes (1936) thought that, fiscal or monetary stimulus would encourage the growth of the economy and increase in employment, but at the cost of inflation. These trade-offs would disappear in the long run as the expectations-



augmented Phillips curve (Friedman, 1968; Phelps, 1967) later pointed out. Inflation surges in most African economies have however been accompanied by expansionary fiscal policies in an attempt to boost growth in the short run casting doubt on the sustainability of such policies.

The structuralist theories provide more localized explanation of developing countries. The argument put across by seers (1962) and Myrdal (1968) was that less developed economies were so constrained structurally that monetary expansion alone could not cause inflation. Rigidities in food supplies, reliance on imports, poor infrastructure and a lack of foreign exchange inflationary forces that remain despite the non-occurrence of demand shocks. Indicatively, droughts and failure of harvest in Ethiopia and Kenya have frequently led to steep food prices that spill over to the rest of the economy.

Both the threshold and nonlinear models make the discussion harder. Empirically, as shown by Khan and Senhadji (2001), inflation can have a non-linear impact on growth: low to moderate inflation (in most developing economies, below 10-15% inflation) could not be detrimental to growth and even beneficial, but inflation beyond this point can be very pernicious to investment and productivity. This model is especially handy in Sub-Saharan Africa, where the inflation rates tend to be moderate then high in the range of double-digit rates.

Finally, the open-economy models emphasize the issue of exchange rates and global prices of commodities. In the case of small open economies, it is through the immediate effect of depreciation on domestic prices through imported inflation and globally through inflation of oil and food prices that the households can quickly experience the impact of the shocks. This view plays a significant role in the realities of the oil importing economies like Kenya and Ghana where the world price dynamics is a major determinant of domestic inflation.

2.2 Empirical Evidence

Empirical studies also give conflicting yet complementary information on the inflation-growth nexus. A lot of them prove the applicability of theoretical models, however, emphasize the significance of country-specific conditions. Several studies confirm the monetarist hypothesis. Darrat (1985) discovered that the growth of the money supply was a major determinant of inflation across economies in Middle East region and this is also reflected in the African environment by Adu and Marbuah (2011) in Ghana and Mawajje and Lwanga (2016) in Uganda. These works indicate that inflationary pressures are always catalyzed by monetary expansion commonly as a result of fiscal financing.

The exchange-rate channel is sufficiently documented as well. Karagoz et al. (2015) presented the result of an exchange rate depreciation being the primary factor of inflation in open developing economies. Sanusi (2010) also reported similar results in Nigeria where currency instability played a key role in causing inflation in the oil-price shocks. In Ghana, the high inflation of 2014 and 2022-2023 were mostly associated with drastic cedi depreciations and demonstrate the vulnerability of import-reliant economies.

Fiscal deficits are also pointed out as part of the empirical work. Jalil et al. (2013) have shown how unremedied fiscal imbalances in Pakistan were converted to inflationary pressures, which is in line with the results of Nguyen (2014) in the Asian region. Aliyu and Englama (2009) also established in Nigeria that monetization of deficits and fiscal dominance were factors that contributed to inflation. Fiscal consolidation has become the key to price stability in most African economies, which have weak tax bases and depend on deficit financing.

The supply-side constraints are a prominent characteristic in African research. As an illustration, a study by Bayo (2011) in Nigeria established that inflation was highly correlated with food supply shocks and ineffective distribution networks and agricultural bottlenecks were found to be the chronic source of inflation in Sub-Saharan Africa (Fosu and Magnus, 2006). Ethiopia offers a good example of situations in which drought and political instabilities have caused periodic inflationary bursts, especially in the period 2008-2011, and once more after 2020. Empirical evidence tends to favour the threshold hypothesis in the terms of inflation-growth relationship. Khan and Senhadji (2001) estimated the growth-optimal level of inflation target at 11%-12% on the part of developing nations. Sarel (1996) also found the same results indicating that the growth declines when inflation reaches a single-digit. This was also confirmed by evidence in Ghana (Adu and Marbuah, 2011) and Kenya (Were and Tiriongo, 2012) which indicated that moderately high levels of inflation can co-exist with growth, but high levels of inflation of two or more digits lead to loss of macroeconomic stability.

2.3 Synthesis

According to the literature, inflation dynamics in the developing economies cannot be described by one single

model. Rather, they are products of a combination of several forces: monetary growth, fiscal deficits, structural bottlenecks, exchange-rate pass-through and world price shocks. In Kenya, Nigeria, Ethiopia, and Ghana, structuralist and open-economy models seem especially applicable, since they reflect the peculiar weaknesses of commodity- dependent, import-dependent, and institutionally inhibited economies. Meanwhile, threshold models give a workable policy guide on the need to maintain growth by keeping inflation in moderate and stable levels.

According to the literature, inflation dynamics in the developing economies cannot be described by one single model. Rather, they are products of a combination of several forces: monetary growth, fiscal deficits, structural bottlenecks, exchange-rate pass-through and world price shocks. In Kenya, Nigeria, Ethiopia, and Ghana, structuralist and open-economy models seem especially applicable, since they reflect the peculiar weaknesses of commodity- dependent, import-dependent, and institutionally inhibited economies. Meanwhile, threshold models give a workable policy guide on the need to maintain growth by keeping inflation in moderate and stable levels.

3. CONCEPTUAL FRAMEWORK

This study conceptual framework shows how inflation in the developing economies is influenced by a combination of interrelated drivers, how such drivers are manifested in the dynamics of inflation and how these eventually impact the economic growth outcomes.

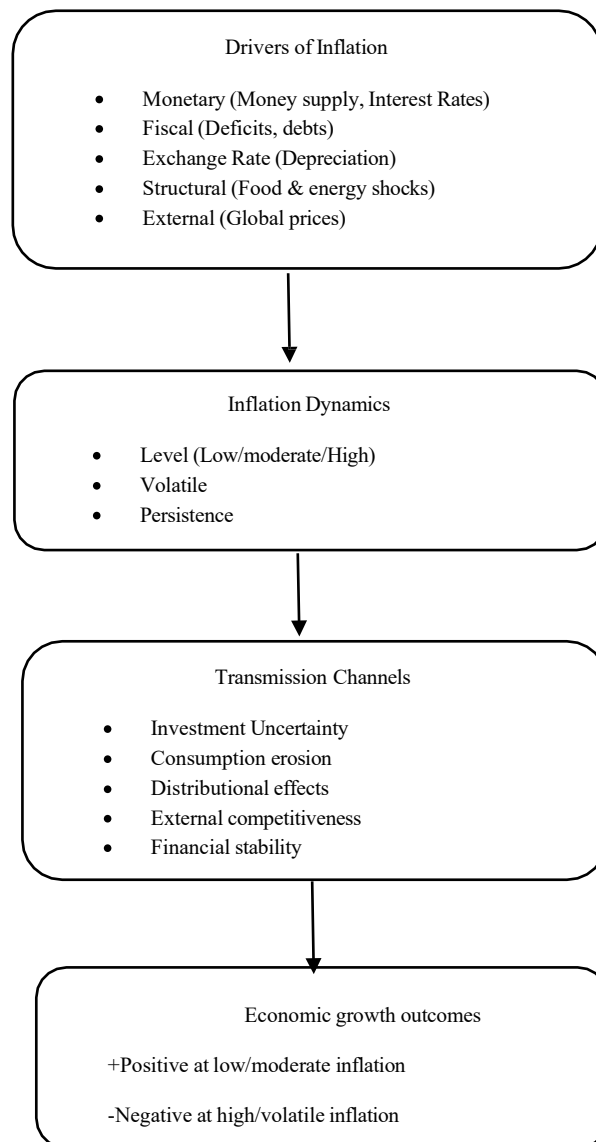


Figure 2, presents the conceptual framework, summarizing how inflation drivers interact with inflation dynamics, transmission channels, and growth outcomes.



The basis of the framework is the drivers of inflation, which act in the monetary, fiscal, structural and external channels. Increased money supply in the form of excess money or loose interest rate policies is likely to generate pressure to increase prices, especially at a time when the output growth is poor. Fiscal deficit, and more so debt monetized by central bank borrowing, contribute to aggregate demand and strengthens inflationary conditions. The depreciation of exchange rates that is a common phenomenon in open African economies increases the price of imports and spreads global inflationary shocks to the local markets. Poor infrastructure, ineffective distribution mechanisms, and the inadequacy of the food and energy supply are other structural bottlenecks that increase inflation persistence. Global commodity price shocks, international financial instability and geopolitical disruptions tend to increase such domestic vulnerabilities.

All these forces together dictate the dynamics of inflation, which are described in three broad dimensions: the level, whether inflation is low, moderate, or high; the volatility, or how often and how sharp the fluctuations of inflation are; and the persistence, or how long inflationary episodes persist once they start. Ethiopia and Ghana have had high inflation, and volatile inflation, and Kenya has had comparatively moderate and stable inflation by an inflation- targeting model.

The framework also describes the effects of inflation on growth, as a result of transmission mechanisms. Uncertain and high inflation is detrimental to investment by risking investment and putting off long-term commitments by domestic and foreign investors. Increased prices decrease buying power of households, and hence consumption demand, particularly in poor households whose income is mainly used to buy food. There are also negative distributional impacts of inflation which increase inequality and impose a burden on social cohesion. Currency depreciation as a source of inflation can enhance its competitive advantage in the external sector through real depreciation or deteriorate its trade balances in case the cost of imports increases at a higher rate than the export revenues. Besides, it affects financial stability because inflation distorts the interest rates, undermines credit distribution, and declines the confidence of the banking sector.

The final component of the framework is the outcome of growth that is contingent on the level and also stability of inflation. When there is low or medium growth, it can be coupled by growth by decreasing the real debt obligations and prefers aggregate demand. Conversely because of high volatile or longer-run inflation rates, the reverse occurs and the negative effects overpower the economy causing disillusionment in the investment, consumption and stability of the macroeconomy. This model therefore assumes a consistent stance with the threshold hypothesis posed by Khan and Senhadji (2001), the structuralist perspective advanced by Seers (1962) and Myrdal (1968) that inflation in the developing economies is multidimensional and context- specific.

4. DISCUSSION

The inflationary trends of Kenya, Nigeria, Ethiopia, and Ghana between the year 2008 and 2024 are both national and structural in nature as it is influenced by household and structural factors of the developing economies.

In Kenya, inflation reached its highest point of 26 percent in 2008 due to the world food and fuel crisis but later came under single digits due to the introduction of an inflation targeting mechanism by the Central Bank of Kenya. Such relative stability implies that expectations can be anchored through the provision of better food supply channels and that volatility can be mitigated with a combination of monetary credibility. The experience of Kenya has been consistent with the structuralist perspective that in developing economies, supply-side shocks take the lead, but it serves to affirm the threshold hypothesis: Kenya maintained inflation largely at less than 10 percent and managed to protect growth without suffering too much monetary tightening.

Nigeria, in its turn, exhibits the problems of fiscal dominance and exchange-rate pressures. The inflation started increasing modestly in the late 2000s to above 33 percent in 2024, due to fuel subsidy cuts, various exchange-rate regimes, and fiscal deficits. This prolonged inflation shows the inability of monetary policy where the fiscal imbalances prevail and support the findings of Aliyu and Englama (2009) on inflationary episodes in Nigeria. The Phillips curve model is not so relevant in this case, where high inflation has accompanied low growth and high unemployment, and the price of lack of consistency in the policy is highlighted.

Ethiopia has witnessed hyperinflation, reaching at one point in 2008 an inflation of 44% and since then moderate in the early 2010s, and then over 30% in 2022 during the conflict and agricultural disturbances. The inflation in Ethiopia is in line with the structuralist approach since, food supply shocks, foreign exchange deficit and political instability have severally caused sudden inflationary spikes. The continuity of these outbursts gives reason to



believe that there is low institutional capacity to anchor expectations, which exposes inflation to domestic shocks and external price fluctuations.

Ghana presents a hybrid case. The country succeeded in lowering inflation to single digits by 2019, but by 2023, it suffered new inflationary pressures of above 38% because of the fast decline of the currency, debt distress, and external shocks. The case of Ghana suggests the significance of the exchange-rate pass-through, as in Karagoz et al. (2015). It demonstrates also the delicateness of inflation gains when fiscal sustainability is not obtained. Though structural bottlenecks contributed to the volatility of inflation, fiscal imbalances and external shocks were the leading causes of inflation volatility.

The combination of the four nations demonstrates that the inflation in developing economies is multidimensional. The continual presence of high inflation can not be attributed to monetary growth, rather structural bottlenecks, exchange-rate instability and fiscal dominance are major contributors. The data corroborates the threshold models: although inflation under 10-15 percent can coexist with growth, the high and unstable inflation of the past years in Nigeria, Ethiopia, and Ghana has destroyed the investment process, as well as consumption and macroeconomic stability.

5. CONCLUSION AND POLICY IMPLICATIONS

This paper has discussed the dynamics of inflation and its effects on the economic growth in Kenya, Nigeria, Ethiopia and Ghana in 2008-2024 based on theoretical and descriptive evidence. These results establish that inflation in such economies cannot be reduced to a monetary phenomenon and is the result of a combination of fiscal deficits, exchange-rate crises, supply-side bottlenecks and global price shocks. As indicated in the conceptual framework expressed in this paper, it is true that these drivers feed into the process of inflation which in its turn affects the growth outcome in terms of investment, consumption, competitiveness and financial stability systems. The evidence offers a number of important conclusions. To begin with, moderate and stable inflation may go hand in hand with growth, which is observed in Kenya where post-2010 inflation was largely held below 10% levels. Second, continuous high inflation rates or fluctuating inflation rates (in the high double digits) weakens growth, as it has been witnessed in Nigeria, Ethiopia and Ghana over the past years. Third, the structuralist and open-economy models are most appropriate to explain inflation in African economies and the threshold models emphasize the growth costs of inflation which is realized above sustainable levels.

The findings are significant in terms of policy implications. First, it is important to increase the autonomy and credibility of central banks to anchor expectations and upkeep price stability. Second, there is a need to have fiscal tightening and discipline in order to limit the inflationary financing pressures. Third, agricultural, energy and infrastructure structural reforms are essential to address the fragilities of supply-side that enable inflation to be enduring. Lastly, it is possible to alleviate vulnerable population groups of inflationary shocks by expanding targeted social protection mechanisms that can cushion human capital and promote inclusive growth.

Finally, inflation in the developing economy is not a monetary issue only, but rather an expression of underlying structural flaws. As long as Kenya, Nigeria, Ethiopia, and Ghana do not act on these root causes, it will be a problem to realize long-term growth and macroeconomic stability.

REFERENCES

1. Adu, G., & Marbuah, G. (2011). *Determinants of inflation in Ghana: An empirical investigation*. *South African Journal of Economics*, 79(3), 251–269.
2. African Development Bank. (2023). *African Economic Outlook 2023*. Abidjan: AfDB.
3. Aliyu, S. U. R., & Englama, A. (2009). *Is Nigeria ready for inflation targeting?* *Munich Personal RePEc Archive* (No. 14870).
4. Bayo, F. (2011). *Determinants of inflation in Nigeria: An empirical analysis*. *International Journal of Humanities and Social Science*, 1(18), 262–271.
5. Central Bank of Nigeria. (2024). *Monetary Policy Communiqué*. Abuja: CBN.
6. Darrat, A. F. (1985). *Inflation in Saudi Arabia: An econometric investigation*. *Journal of Economic Studies*, 12(4), 41–51.
7. Fosu, A., & Magnus, J. (2006). *Food price shocks and inflation in Sub-Saharan Africa*. *African Development Review*, 18(2), 221–248.
8. Friedman, M. (1968). *The role of monetary policy*. *American Economic Review*, 58(1), 1–17. *International Monetary Fund*. (2023). *World Economic Outlook: Inflation and Uncertainty*. Washington, D.C.: IMF.
9. Jalil, A., Tariq, R., & Bibi, N. (2013). *Fiscal deficit and inflation: New evidence from Pakistan*. *Economic Modelling*, 37, 120–126.



10. Karagoz, M., Demirel, B., & Bozdag, G. (2015). *Pass-through effect from exchange rates to prices*. *Procedia Economics and Finance*, 38, 438–455.
11. Keynes, J. M. (1936). *The General Theory of Employment, Interest and Money*. London: Macmillan.
12. Khan, M. S., & Senhadji, A. S. (2001). *Threshold effects in the relationship between inflation and growth*. *IMF Staff Papers*, 48(1), 1–21.
13. Mawajje, J., & Lwanga, M. M. (2016). *Inflation dynamics and agricultural supply shocks in Uganda*. *African Journal of Economic and Management Studies*, 7(4), 547–567.
14. Myrdal, G. (1968). *Asian Drama: An Inquiry into the Poverty of Nations*. London: Penguin. National Bank of Ethiopia. (2023). *Annual Report 2022/23*. Addis Ababa: NBE.
15. Nguyen, V. B. (2014). *Effects of fiscal deficit and money supply on inflation: Evidence from Asia*. *Journal of Economics, Finance and Administrative Science*, 20(38), 49–53.
16. Sanusi, L. S. (2010). *Exchange rate pass-through and monetary policy in Nigeria*. *Central Bank of Nigeria Economic Review*, 48(2), 1–25.
17. Sarel, M. (1996). *Nonlinear effects of inflation on economic growth*. *IMF Staff Papers*, 43(1), 199–215.
18. Seers, D. (1962). *A theory of inflation and growth in underdeveloped economies*. *Oxford Economic Papers*, 14(2), 173–195.
19. Were, M., & Tiriongo, S. (2012). *Central bank policy and inflation dynamics in Kenya*. Kenya Institute for Public Policy Research and Analysis Discussion Paper.
20. World Bank. (2024). *World Development Indicators: Inflation, consumer prices (annual %)*. Washington, D.C.: World Bank

APPENDIX

Country Name	Ethiopia	Ghana	Kenya	Nigeria
2008	44.35669	16.49464	26.23982	11.58108
2009	8.483644	19.24695	9.234126	12.53783
2010	8.149264	10.73339	3.961389	13.74005
2011	33.24996	8.728459	14.02249	10.82614
2012	23.60042	11.18634	9.37777	12.22424
2013	7.464022	11.66619	5.717494	8.495518
2014	6.89002	15.48962	6.878155	8.047411
2015	9.5689	17.14997	6.582154	9.009435
2016	6.628133	17.45463	6.29725	15.69681
2017	10.68712	12.37192	8.00565	16.50227
2018	13.83304	7.808765	4.689806	12.09511
2019	15.80963	7.14364	5.239638	11.39642
2020	20.35635	9.88729	5.405162	13.24602
2021	26.83952	9.971089	6.107936	16.95285
2022	33.88988	31.2559	7.659863	18.84719
2023	30.21883	38.10697	7.671396	24.65955
2024	21.03775	22.84833	4.489789	33.2421

Inflation, consumer prices (annual %) Source; World Development Indicators