Impact of Political Budget Cycles on Inflation in the East African Community

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Abstract
Price stability is a crucial goal of macroeconomic policy in all economies, including the East African Community (EAC) region. However, concerns arise due to high fiscal deficits and inflation, and the relationship between price changes and fiscal deficits remains unclear. This study sought to address this gap by analysing the impact of election-driven fiscal deficits on inflation in the EAC. The study utilized Pooled Mean Group (PMG) estimation technique using data for the period 2000-2021. Inflation rate in the EAC substantially rose in election and post-election year. The study found a significant and positive relationship between fiscal deficits and inflation rates, particularly election-driven deficits. This implies that political budget cycles have a substantial impact on inflation within the EAC. However, it's worth noting that in the year leading up to elections, inflation remained low, and fiscal deficits in the pre-election year had an adverse effect on it. Furthermore, the research revealed a positive association between money supply and trade with the present inflation rate, while a stronger domestic currency contributed to price stability in the EAC. The study suggests that countries in the region should strengthen fiscal rules and discipline to minimize deficits and ensure price stability.

Keywords: Fiscal deficits; inflation; elections and political budget cycles
JEL Classification Codes: E31, E62

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1. Introduction

In developing economies, key macroeconomic policy goals include economic growth, full employment, favourable external balance, and price stability. However, high inflation remains a pressing issue globally and particularly in developing countries like the East African Community (EAC) Partner States. The EAC Development Strategies and Vision 2050 emphasizes the importance of maintaining a single-digit inflation rate, but this target is yet to be achieved in some Partner States (EAC Vision 2050 Report, 2016).

The impact of inflation on the economy varies depending on its severity. Moderate inflation rates contribute to macroeconomic stability, while persistent and severe inflation can be detrimental. High inflation reduces the purchasing power of the currency, leading to a decline in private investment and consumption spending (Barro, 1995; Mankiw, 2018). It also affects a country's international position, as high domestic prices make exported products relatively expensive, resulting in a decline in net exports and aggregate output (Romer, 2019; Wickens, 2013).

Various factors determine inflation, including money supply growth, exchange rate changes, wage rates, production costs, and expectations (Wickens, 2013). Aggregate demand and fiscal and monetary policies also play a role in determining inflation levels. Expansionary monetary policies, such as low interest rates and increased money supply, can contribute to rising prices. Similarly, expansionary fiscal policies, such as increased public expenditure through subsidies and welfare programs, can boost aggregate demand and, subsequently, the price level (Romer, 2019). The EAC countries commonly face high levels of fiscal deficits, inflation, real interest rates, and accelerating money supply growth, with variations based on factors like political systems, food and oil imports, agricultural significance, trade access, susceptibility to weather shocks, and regulatory regimes (Nguyen, 2015; Mawejje and Odhiambo, 2022).

In the EAC, inflation rates and fiscal deficits tend to rise during election periods (see Appendix A). The competitive nature of multiparty political systems has led politicians and political parties to adopt strategies to win elections, such as offering cash handouts to voters, which increases the volume of money in circulation and leads to inflation (Nordhaus, 1975). They also strategically use fiscal policies, like reducing tax rates or subsidizing essential commodities such as electricity, fuel, maize and fertilizer, to enhance their electoral prospects. Whether or not election-driven fiscal deficits are inflationary in the EAC is an empirical question.

Political budget cycles thrive in environments where voters are uninformed and short-sighted, as opportunistic politicians exploit their preferences for short-term gains (Nordhaus, 1975; Rogoff, 1990). These actions can be detrimental to the macroeconomy, as politicians prioritize short-term employment over price stability (Nordhaus, 1975). This study examines the impact of elections, fiscal deficits, and election-driven fiscal deficits on inflation in the EAC.

Fiscal deficits and inflation rate in the EAC Partner States have been volatile over years. Between 2000 and 2018, the EAC countries experienced fiscal deficits and inflation levels above the recommended threshold of 5 percent, as outlined in the EAC's development strategy and Vision 2050. The inflation rate remained consistently above 5 percent, except for 2002, 2010, and 2011, with the highest average rate of 17.7 percent observed in 2008 (WDI, 2022). The global financial crisis of 2008, triggered by asset bubbles in the United States, had spillover effects worldwide, leading to a cash crunch and high inflation. Civil unrest in Burundi and post-election violence in Kenya in 2007/2008 further destabilized the macroeconomic

environment. Similarly, fiscal deficits consistently exceeded 6 percent during the study period, with the highest average deficit of 11.74 percent observed in 2004 due to civil unrest in Burundi (WDI, 2022; AED, 2022).

Interestingly, the average fiscal deficit in the EAC tended to rise during election periods. For example, between 2000 and 2003[1], the average fiscal deficit increased from 9.18 percent to 10.26 percent. Similar patterns were observed between 2005 and 2007[2], as well as between 2012 and 2016[3], with fiscal deficits rising during election years. Inflation rates also showed an upward trend during election periods, such as in 2002 and between 2010 and 2013, when elections were held in various EAC countries. However, the relationship between inflation rate and fiscal deficits changed from negative in the early 2000s to positive from 2014 onwards.

Inflation rate remains high and budget deficits continue to grow in the EAC. As to whether inflation in these countries is driven by budget deficits is not clear. Additionally, budget deficits and inflation rate rose during elections. The political dimensions of price change have not attracted substantial empirical investigation. Do politically motivated fiscal deficits impact inflation in the EAC? Does inflation change with elections? It is a research question as to whether the rise in budget deficits during elections influence inflation rates. This is a gap this study sought to close by examining the effect of election-driven fiscal deficits on inflation. This study examines the link between inflation and budget deficits and whether election cycles have impact on inflation in the EAC.

The structure of this study is organized as follows: The initial section comprises an introduction, while the second section consists of a literature review. The third section is on methodology covering analytical models and data issues. Section four covers empirical findings and discussions, while section five closes with summary, conclusion and implications for policy.

2. Literature Review

2.1 Theoretical Literature Review

Theoretical perspectives on fiscal deficits and inflation produce unclear and mixed results. For example, according to monetarist theory proposed by Friedman (1968), inflation is primarily influenced by monetary factors. The theory suggests that the country's monetary authority plays a key role in controlling inflation by managing the size of fiscal deficits and their financing, particularly through monetization. Monetizing fiscal deficits leads to an increase in the money supply, which can result in upward pressure on prices and crowd out private investment. However, the theory fails to address the inverse relationship between inflation and budget deficits, as well as the impact of electoral cycles on inflation.

The weak variant of fiscal theory challenges the traditional view of inflation as a purely monetary phenomenon and emphasizes the role of fiscal policy in determining price levels (Sargent and Wallace, 1981; Carlstrom and Fuerst, 2000). It argues that price stability depends on the coordination of fiscal and monetary policies. While money supply and inflation are related, the theory suggests that the monetary authority has limited control over inflation when fiscal policy dominates. In such cases, the fiscal authority creates budget deficits, leading to increased inflation and reduced control over price stability. This theory proposes that inflation

[1]General elections were held in Tanzania in 2000, Uganda in 2001, Kenya in 2002 and Rwanda in 2003.
[2]General elections were held in Tanzania and Burundi in 2005, Uganda in 2006 and Kenya in 2007.
[3]General elections were held in Kenya in 2013, Tanzania and Burundi in 2015 and Uganda in 2016.

is driven by fiscal factors and considers budget deficits as the root cause of demand-pull inflation.

The strong variant of fiscal theory, introduced by Leeper (1991), Woodford (1994,1995,1996), and Sims (1994, 1997) and later developed by Carlstrom and Fuerst (2000), challenges the dominant role of monetary policy in determining prices. Fiscal theory of price level argues that the activities of the monetary authority, such as printing money, have no impact on price levels. Instead, fiscal authorities, through government revenues, expenditure, and debt, play a crucial role in determining inflation. The theory suggests that in non-Ricardian equivalence economies, where fiscal policy dominates, individuals' wealth effects influence the price level. High fiscal deficits are seen as beneficial, increasing aggregate spending and resulting in higher price levels (inflation). This conflicts with the Ricardian Equivalence Hypothesis, which states that budget deficits have no impact on prices, interest rates, or aggregate demand.

Limited evidence exists regarding the connection between inflation, elections, and fiscal deficits. The opportunistic theory of political business cycles suggests that politicians pursue short-term gains during campaigns, resulting in lower unemployment rates but higher inflation rates (Nordhaus, 1975). The equilibrium political budget cycles theory, on the other hand, focuses on fiscal policy and argues that rational voters reward candidates who provide higher levels of public goods, leading to increased public expenditure and fiscal deficits. The inflationary potential of high fiscal deficits is supported by the views of Wallace, (1981) and Carlstrom, and Fuerst (2000).

2.2 Empirical Literature Review

Empirical studies produce mixed results on the determinants of inflation as well as the link between inflation and fiscal deficits. For instance, Loungani and Swagel (2003) investigated inflation determinants in 53 developing countries between 1964 and 1998, identifying the expansion of money and exchange rate fluctuations as significant factors. Using a pooled probit model, Domac and Yucel (2005) examined 15 developing market nations from 1980 to 2001 and identified an expanding output gap, food production index, and lingering budget deficit as factors contributing to inflation.

Some studies suggest an indirect relationship between inflation and fiscal deficits. Tekin-Koru and Ozmen (2003) analyzed the link between fiscal deficits, monetary growth, and inflation in Turkey from 1983 to 1999 and found an indirect relationship between inflation and fiscal imbalances. Similarly, Keho (2016) analysed the effects of the supply of real money balances and fiscal shortfall on inflation in the West African Economic and Monetary Union. The study identified an inverse connection between price level and budget shortfall in Togo and Niger. Contrary, using seemingly unrelated regression model, Cottarelli et al. (1998) examined factors influencing inflation in 47 countries from 1993 to 1996 and found that fiscal imbalance had a significant impact on inflation, while wage indexation and current account deficits did not. An independent central bank and a fixed exchange rate system were also found to affect inflation. Similarly, Solomon and Wet (2004) explored the effect of budget deficits on inflation in Tanzania, discovering a positive relationship and highlighting the impact of monetization. Darrat (2000) studied the relationship between government budget deficits and inflation in Greece from 1957 to 1993 using cointegration analysis. The research showed a direct association between budget deficits and elevated price levels.

Catao and Terrones (2005) analysed the impact of fiscal deficits on inflation in 107 countries from 1960 to 2001 and found a persistent rise in general price levels due to budgetary deficits

in high-inflation and emerging economies. The study was consistent with that of Fischer et al. (2002) who established that the association between the budget deficit and inflation was only significant during seasons of high inflation in high-inflation nations.

Wolde-Rufael (2008) studied Ethiopia from 1964 to 2003 using cointegration technique and established a substantial association between the fiscal imbalance and inflation, with the former accounting for 43 percent to 65 percent of inflation variation. Kwon et al. (2009) investigated link between monetary growth, fiscal policy, and inflation in 71 nations from 1963 to 2014. The research findings indicated that public debt had a consistent and significant impact on inflation in developing countries.

Oladipo and Akinbobola (2011) analyzed the causal association between the fiscal deficit and inflation in Nigeria from 1970 to 2005, revealing a one-way causality from fiscal deficit to inflation. Ndanshau (2012) explored Tanzania's budget shortfall, money supply, and price increase from 1967 to 2010, finding a causal impact of inflation on the monetary base and budget deficit. Jayaraman and Chen (2013) also observed a direct association between fiscal imbalance and inflation in Pacific Island nations.

Lin and Chu (2013) using DGMM[4] and DPQR[5] analyzed 91 states between 1960 and 2006 and concluded that fiscal deficits were inflationary in high-inflation and developing economies. Using time series data and Multivariate Granger causality test, Raji et al. (2014) examined relationship between real money supply, price and inflation in Nigeria from 1970 to 2010. The study outcomes suggested a bidirectional causality between real money supply and price level. Nguyen (2015) studied nine Asian countries from 1985 to 2012, finding a significant influence of fiscal deficits and M2 supply on inflation. Aslam and Lebbe (2016) investigated effects of fiscal deficits in Sri Lanka from 1959 to 2013 suing multiple regression model. The findings revealed a positive relation between inflation and the budget deficit.

The existing theories and empirical studies on inflation and fiscal deficits do not address the connection between electoral cycles and the macroeconomic indicators. There is no clear explanation on the impact of election-driven fiscal deficits on inflation. This study aims to fill this gap by examining the influence of elections and election-driven fiscal deficits on inflation in the EAC.

3.Methodology

3.1 Econometric Model

This study builds on Cato and Terrones' framework (2005) to analyse the link between politically-driven budget deficits and inflation in the EAC. It considers the potential impact of monetization and elections on inflation. Therefore, a functional analytical model of inflation could be written as

$$INFL = f(FD, ER, BM, OPN, \mathrm{ED}_1, \mathrm{ED}_2, \mathrm{ED}_3, FD * \mathrm{ED}_1, FD * \mathrm{ED}_2, FD * \mathrm{ED}_3) \quad (1)$$

Where; *INFL* is Inflation rate, *FD* is fiscal deficit, *BM* is broad money supply, *ER* is Exchange rate, *OPN* is Trade openness, ED_1 is dummy for the year before elections, $ED_2$is dummy for election year and $ED_3$is dummy for the year after elections.

[4] DGMM implies Dynamic Generalized Method of Moment
[5] DPQR implies Dynamic Panel Quantile Regression

The model could further be written explicitly as follows

$$INFL_{i,t} = A_0 + B_k INFL_{i,t-k} + C_k FD_{i,t-k} + D_k ER_{i,t-k} + E_k BM_{i,t-k} + F_k OPN_{i,t-k} + G_k ED_{i,t-k} + H_k (FD * ED)_{i,t-k} + \mu_i + \varepsilon_{i,t} \quad (2)$$

Where; $INFL_{i,t}$ isInflation Rate as measured by consumer price index, $FD_{i,t}$is Primary fiscal deficit / GDP ratio, $BM_{i,t}$is Broad Money Supply/GDP ratio, $ER_{i,t}$is Exchange Rate,$OPN_{i,t}$is Trade Openness, $ED_{i,t-k}$is election dummies for the year before election, election year, and year after a presidential election , $(FD * ED)_{i,t-k}$ interaction term between fiscal deficit and election dummy, μ_iUnobserved individual country effect and $\varepsilon_{i,t}$error term.

3.2 Data

The World Bank (WDI), IMF's International Financial Statistics (IFS) and World Economic outlook, East African Community (EAC facts and figures), and the African Elections Database (AED) provided the data. The variables utilized in the study include inflation measured by the consumer price index, fiscal deficit as ratio of GDP, broad money supply measured as ratio of GDP, exchange rate as local currency per US dollars, Trade openness is measured as value of imports and exports as ratio of GDP, election dummies captured as 1 for pre, during and post-election years and 0 otherwise.

3.3. Estimation Technique

The analytical model of the study is a dynamic panel data equation with large T of 22 years and small N of 5 East African Community Partner States. Some of the estimation issues with the dynamic panel models could be resolved using Generalized Method of Moments (GMM) regression method, which was developed by Arellano and Bond (1991), Arellano and Bover (1995), and Blundell and Bond (1998). In the model, country fixed effects may be linked with the lagged dependent variable. Thus, the model could be endogenous. In light of this, the study utilized pooled mean group (PMG) estimation technique as the appropriate estimation technique proposed by Pesaran et al. (1997; 1999). The PMG estimator can enable the short-term dynamic specifications to vary per cross-sectional unit while accommodating homogeneity of long-run coefficients. The dynamic specification is adjustable since there is no guarantee that the short-run slope coefficients would be equal.

The panel Autoregressive-Distributed Lag (ARDL) model for the time period t= 1, 2,…,T and countries i=1,2,….N is specified as follows;

$$INFL_{i,t} = \sum_{k=1}^{p} \gamma_{i,k} INFL_{i,t-k} + \sum_{k=0}^{q} \lambda'_{i,k} X_{i,t-k} + \mu_i + \varepsilon_{i,t} \quad (3)$$

Where; $INFL_{i,t}$ is inflation rate measured as consumer price index, $X_{i,t}$is k × 1 vector of independent variables namely, fiscal deficit, exchange rate, broad money supply, trade openness, election dummies and election driven fiscal deficits, $\gamma_{i,k}$is a scalar of coefficients of lagged inflation rate, $\lambda'_{i,k}$ is a k × 1 vector of the coefficients of the explanatory variablesμ_i is individual country fixed effects and $\varepsilon_{i,t}$ is the error term.

Equation (3) can be re-written as Vector Error Correction Model (VECM) as follows;

$$\Delta INFL_{i,t} = \emptyset_{i,t} INFL_{i,t-1} + \beta' X_{i,-1} + \sum_{k=1}^{p-1} \gamma_{i,k} \Delta INFL_{i,t-k} + \sum_{k=0}^{q-1} \lambda'_{i,k} \Delta X_{i,t-k} + \mu_i + \varepsilon_{i,t} \quad (4)$$

The estimated PMG equation is given as:

$$\Delta FD = -\emptyset_i \left(FD_{i,t-1} - \omega_1 ER_{i,t} - \omega_2 BM_{i,t} - \omega_3 OPN_{i,t} - \omega_4 ED_{i,t} - \omega_5 (FD * ED)_{i,t} - \omega_{0,i} \right) + \beta_{1,i} \Delta ER_{i,t} + \beta_{2,i} BM_{i,t} + \beta_{3,i} OPN_{i,t} + \beta_{4,i} ED_{i,t} + \beta_{5,i} (FD * ED)_{i,t} + \varepsilon_{i,t} \quad (5)$$

4. Results and Discussion

4.1 Pooled Mean Group (PMG) Estimation Results and Analysis

This study used the Pooled Mean Group (PMG) technique to determine the implications of an election-driven fiscal deficit on inflation in the EAC. Pre-estimation tests including panel unit root, co-integration and cross-sectional dependence were carried out (see the appendix Table B1, C1 and D2). Fiscal deficit was interacted with each election dummy (ED_1, ED_2 and ED_3) to capture political drive.

4.1.1 Effect of Pre-election year fiscal deficits on inflation in the EAC

The study analysed the effect of pre-election year fiscal deficit on inflation and whether pre-election timing matters in the EAC. Pre-election fiscal deficit variable was obtained by interacting fiscal deficit and pre-election-year dummy. Table 1 presents results for pre-election year analysis.

Table 1: Effects of Pre-Election Year Fiscal Deficits on inflation in the EAC.

Long Run Results				
Dependent Variable: Inflation Rate				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob***
FD	0.025	0.202	0.124	0.902
ED_1	-5.198	2.101	-2.474	0.016**
FD_1	-0.709	0.287	-2.469	0.016**
ER	-0.001	0.000	-1.835	0.071***
OPN	0.231	0.037	6.217	0.000*
BM	0.161	0.134	1.201	0.234
Short Run Results				
Dependent Variable: Inflation Rate				
ECT	-0.988	0.078	-12.696	0.000*
Δ(FD)	0.040	0.345	0.117	0.907
Δ(ED_1)	0.982	4.436	0.221	0.825
Δ(FD_1)	0.368	0.522	0.706	0.483
Δ(ER)	-0.011	0.032	-0.327	0.744
Δ(OPN)	0.070	0.116	0.601	0.550
Δ(BM)	-0.879	0.448	-1.961	0.054***
C	-4.460	0.856	-5.212	0.000*
Number of observations	105		Lag selection method	AIC

Notes: ECT is the error correction model; Δ indicates the variable is first differenced. ED_1 and FD_1 are pre-election-year dummy and pre-election-year fiscal deficit, respectively. *, ** and *** stand for significance level of 1%, 5% and 10%, respectively. Pre-election-year fiscal deficit is calculated as $FD_1 = FD * ED_1$

The long run results suggest a negative and significant association between the consumer price index which employed as the measure of inflation rate (INF) and pre-election-year dummy (ED_1). In the year leading up to elections, inflation rates were notably lower, showing a decline of about 5.2% at a 5% level of statistical significance. This suggests that there is a substantial fall in inflation rates just prior to elections in EAC countries. Pre-election fiscal deficits have negative impact on inflation. This could be explained by the fact that in the period leading up to an election, public spending might be lower in comparison to the election year, resulting in a reduction in aggregate demand within the economy. Consequently, demand-pull inflation could be less pronounced prior to elections.

The results indicate that official exchange rate negatively impacted inflation in the EAC. Appreciation of currency 10 percent leads to a decline in inflation rate by approximately 0.1 percent in the long term at 10 percent level of significance. This implies that a stronger currency is critical for price stability in the EAC. Long term dynamics show that trade openness has a positive and statistically significant effect on inflation. A 10 percent increase in trade openness increase inflation in EAC by about 6 percent at 1 percent significance level. More open and fragile economies are more vulnerable to external shocks that cause inflation. Fragile non-oil producing countries suffer huge shocks and domestic inflation when crude oil prices escalate in international markets. The error correction coefficient was negative and significant implying that the model was significant.

4.1.2 Effect of Election Year Fiscal deficit on inflation in the EAC.

An election-year fiscal deficit was obtained from interacting fiscal deficit (FD) and election year dummy (ED_2). Table 2 provides findings on the effect of election-driven fiscal deficit(FD_2)on inflation in an election year in the EAC.

Table 2 Effect of Election Year Fiscal Deficit on Inflation in EAC Countries

Long Run Results **Dependent Variable: Inflation Rate**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob***
FD	0.127	0.245	0.520	0.604
ED_2	12.399	5.494	2.257	0.027**
FD_2	1.121	0.460	2.441	0.017**
ER	-0.003	0.001	-2.660	0.009*
OPN	0.044	0.053	0.825	0.412
BM	0.296	0.192	1.544	0.128
Short Run Results **Dependent Variable: Inflation Rate**				
ECT	-0.810	0.190	-4.271	0.000*
Δ(FD)	-0.220	0.354	-0.621	0.536
Δ(ED_2)	-6.526	3.785	-1.724	0.090***
Δ(FD_2)	-0.557	0.362	-1.537	0.129
Δ(ER)	-0.036	0.037	-0.975	0.333
Δ(OPN)	0.229	0.068	3.385	0.001*
Δ(BM)	-1.376	0.533	-2.579	0.012*
C	3.056	1.848	1.654	0.103
Number of observations	105	Lag selection method		AIC

Notes: ECT is the error correction model; Δ indicates the variable is differenced. ED_2 andFD_2 are election year dummy and election year fiscal deficit respectively. * and ** indicate significance level of 1% and 5% respectively. Election-year fiscal deficit is calculated as$FD_2 = FD * ED_2$

During election years, the inflation rate was significantly higher compared to other years at a 5% significance level. However, the short-term effect of elections had a negative impact on the inflation rate. The long-term findings show that election year fiscal deficits havepositive and substantial relationship with inflation. This implies that, at 5% level of statistical significance, election-driven fiscal deficits increase the long-term rate of inflation in the EAC. This could be attributed to the rise in public spending during campaigns that may increase aggregate demand and hence demand-pull inflation. The injection of campaign funds into an economy leads to an expansion in the money supply, which in turn can contribute to inflation. The finding agrees with Nordhaus' (1975) argument that inflation is bound to increase during elections since government seeking re-election expand employment in total disregard of the inflationary consequences.

A fiscal deficit incurred in a pre-election period (FD_1) has a long term direct and significant association with inflation in the EAC. The pre-election year deficit raises inflation by about 0.71 percent. Campaigns increase public spending in an economy leading high aggregate demand thus creating short-lived demand-pull inflation. The observation is consistent with the fiscal theory of Carlstrom and Fuerst (2000) that argue that inflation could be fiscally-driven. The findings also agree with empirical literature that fiscal deficits could be inflationary (Solomon and Wet, 2004; Catao and Terrones, 2005; Wolde-Rufael, 2008; Ndanshau, 2012; Lin and Chu, 2013; Jayaraman and Chen (2013); Raji et al. 2014; Aslam and Lebbe 2016).
Trade openness had positive short run association with inflation rate. Broad money supply as ratio of GDP significantly lowered inflation in the EAC in the short run.

4.1.3 Effect of Post-Election-Year Fiscal Deficit on inflation in the EAC.
This study extended the investigation into the effects of post-election-year budgetary deficit on inflation in the EAC. The fiscal deficit is interacted with post-election-year dummy. The findings are summarized in Table 3.

Table 3 Effect of Post-Election Year Fiscal Deficit on Inflation in the EAC

Long Run Results **Dependent Variable: Inflation Rate**				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob***
FD	-0.129	0.161	-0.803	0.425
ED_2	33.076	6.243	5.298	0.000*
FD_2	3.040	0.497	6.118	0.000*
ER	-0.004	0.002	-1.815	0.074***
OPN	0.082	0.049	1.672	0.099***
BM	0.217	0.148	1.467	0.147
Short Run Results **Dependent Variable: Inflation Rate**				
ECT	-0.768	0.268	-2.865	0.006*
Δ(FD)	-0.358	0.310	-1.156	0.252
$\Delta(ED_2)$	-8.195	8.215	-0.998	0.322
$\Delta(FD_2)$	-0.769	0.670	-1.148	0.255
Δ(ER)	-0.034	0.050	-0.668	0.506
Δ(OPN)	0.198	0.110	1.801	0.076***
Δ(BM)	-1.569	0.765	-2.051	0.044***
C	2.255	1.886	1.196	0.236
Number of observations	105	Lag selection method	AIC	

Notes: ECT is the error correction model; Δ indicates the variable is first differenced. ED_3 andFD_3 are post-election-year dummies of year and fiscal deficit, respectively. * and *** indicate significance level of 1% and 10%, respectively.

The results of the study indicate that the long-term and short-term relationships between inflation and the explanatory variables during election years and post-election years are alike. The magnitude of the impact of post-election year fiscal deficit on inflation was higher compared to pre-election and election years.

5. Conclusion and Policy Implications

Conclusion

The study examined the impact of fiscal deficits on inflation in the EAC and whether political budget cycles matter. Panel secondary data for the five EAC Partner States was utilised between 2000 and 2021. The study explores inflation in the EAC and identifies its significant direct association with election and post-election year fiscal deficits, with a greater rise observed during the post-election period. The research utilizes PMG estimation techniques to reveal a significant increase in the inflation rate in the election and post -election year and a decline in the year preceding an election. Moreover, trade openness and broad money supply in the region are found to contribute to inflationary pressures. On the other hand, exchange rate has a negative impact on inflation in the EAC.

Policy Implications

The study shows that election and post-election year fiscal deficits in the EAC increase inflation. To achieve price stability, EAC governments must maintain a sustainable fiscal stance through fiscal discipline, including debt management, effective revenue collection, and public expenditures during elections. Adhering to fiscal rules and setting attainable goals is crucial. Governments should ensure fiscal transparency and accountability, implement fiscal rules, promote institutional independence, and raise public awareness about fiscal information. Economic agents should understand the consequences of political budget cycles and their impact on price stability through periodic fiscal reports. Civic education should be emphasized to educate voters on competent leaders and avoid making decisions based on rational ignorance during elections. There is need for monetary authorities to stabilize exchange rate and control money supply efficiently to ensure price stability in the region.

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APPENDIX

Appendix A

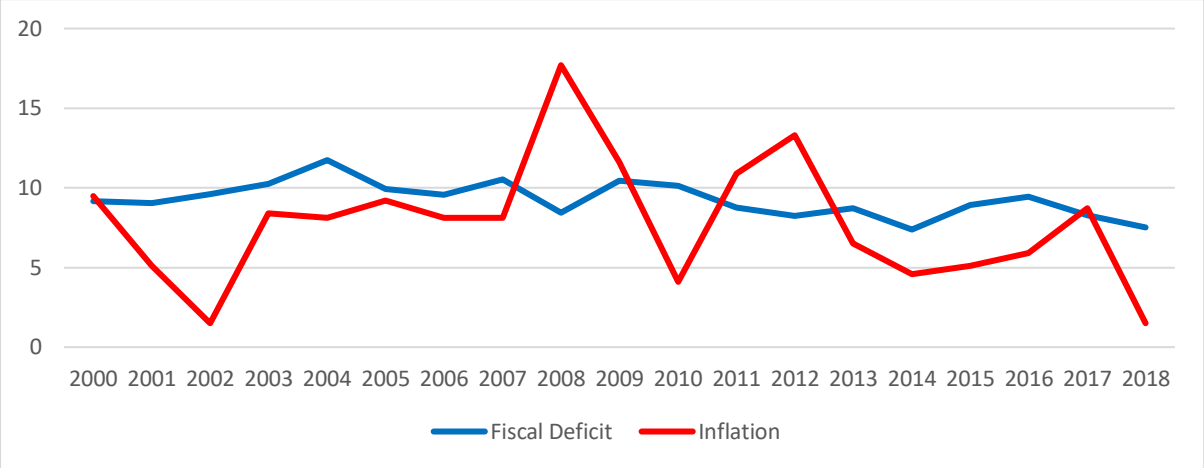

Figure A1: Trend of fiscal deficit and inflation in the EAC for the period 2000-2018
Source: WDI, World Bank (2022), WEO, IMF (2023)

Appendix B

Summary Statistics

Table B1 presents descriptive statistics of variables used in the model.

Table B1 Descriptive statistics of selected variables

Variable	Minimum	Maximum	Mean	Standard Deviation
INFL	-2.815	26.240	7.312	5.081
FD	2.8	20	9.037	3.703
ER	67.318	3727.069	1233.862	947.009
OPN	20.964	64.479	39.848	10.134
BM	-0.064	38.084	16.121	7.701
ED_1	0	1	0.191	0.395
ED_2	0	1	0.2	0.402
ED_3	0	1	0.191	0.395
Number of observations =110				

Notes: INF, FD, ER, OPN, BM, ED_1, ED_2 and ED_3 refer to inflation rate, fiscal deficit, ER exchange rate, trade openness, Broad money supply, pre-election year dummy, election year dummy and post-election year dummy.

Appendix C

Panel unit root tests

This study adopted two panel unit root tests namely, Levin, Lin and Chu (2002), and Hadri (1999). Table C1 provides panel data unit root test results at level and first differences.

Table C1 Panel unit root test results

Variable	**H.LM**		**LLC**		**Order of Integration**
	Statistic	**P value**	**Statistic**	**P value**	
INFL	1.6771	0.0468	-3.1555	0.0008	I (0)
FD	-1.7288	0.9581	7.7843	0.0000	I (1)
ER	-0.3426	0.6341	-3.4311	0.0003	I (1)
OPN	0.5631	0.2867	-4.5605	0.0000	I (1)
BM	4.4192	0.0000	-3.2028	0.0007	I (0)

Notes: HLM is Hadri LM test and LLC is Levin-Lin-Chu test. I (0) and I (1) indicate stationary at level and after first differencing respectively.

Appendix D

Panel Cross-Section Dependence Test

CD test results are presented in table D1

Table D1 Pesaran's Test Results for Cross-Sectional Dependence

	Statistic	**P-value**
Pesaran CD test	0.693481	0.4880

The null hypothesis, which suggests no cross-sectional dependence, is accepted at a 5% level of significance. The variables in the model are therefore cross-sectionally independent.