



Research Article

Empirical Investigation of Inflation Dynamics in Nepal: A Multivariate Co-integration and VECM Framework

Gyan Mani Adhikari¹, *Santosh Chhetri², Shilu Chalise³

¹Associate Professor, Central Department of Management, TU

²Assistant Professor, Tribhuvan Multiple Campus, TU

³Assistant Professor, Janapriya Multiple Campus, TU

*Corresponding Email : suntoshchhetri47@gmail.com

Article History : Received Sept. 2024 Revised Nov. 2024 Accepted Dec. 2024

DOI : DOI : <https://doi.org/10.3126/jjis.v13i1.75532>

ABSTRACT

This study investigates the determinants of inflation in Nepal using annual time series data from 1975 to 2022, employing the Engle-Granger co-integration technique, Vector Error Correction Model (VECM), and Granger causality tests. The research examines the relationships between inflation and key macroeconomic variables including budget deficit, gross fixed capital formation, Indian inflation, broad money supply (M2), and private consumption. The empirical findings reveal significant relationships between these variables, with particularly strong bidirectional causality between inflation and budget deficits. The VECM results indicate that private consumption and money supply are crucial determinants of inflation in both the short and long run, with the error correction term showing an adjustment speed of approximately 11% per year toward equilibrium. This relatively slow adjustment suggests that inflationary shocks in Nepal tend to persist over time. The study also finds that Indian inflation significantly influences Nepal's price levels, highlighting the strong economic interconnectedness between the two countries. While some variables like gross fixed capital formation show theoretical relevance, their statistical significance in the



model is limited, possibly reflecting the complex nature of investment impacts on inflation. These findings have important policy implications, suggesting the need for coordinated fiscal and monetary policies, maintenance of sustainable fiscal positions, effective management of private consumption and money supply, and careful consideration of external economic factors in inflation management strategies. The study contributes to the existing literature by providing empirical evidence specific to Nepal's context while supporting broader theoretical frameworks of inflation determination. The results underscore the complex and multifaceted nature of inflation in Nepal, where both domestic and external factors play significant roles, and suggest that successful inflation management requires a comprehensive policy approach that addresses fiscal discipline, monetary stability, and structural economic constraints while remaining mindful of international economic linkages.

Keywords: Budget deficit, inflation, money supply, aggregate demand, government expenditure

INTRODUCTION

Inflation refers to a sustained and significant increase in the price level over time, driven by the interplay between economic forces like aggregate demand and supply. It is widely acknowledged that three primary causes contribute to inflation (Shaikh et al., 2022; Totonchi, 2011). Inflation might occur when aggregate demand surpasses aggregate supply, a common scenario in economies operating at full employment of resources known as demand-pull inflation. Inflation may also arise from factors such as increased market power in imperfectly competitive markets, rising labor costs, higher prices of imported inputs, and persistent resource shortages. Inflation works as an autoregressive mechanism that involves self-sustaining inflationary pressures driven by distributional conflicts among social groups. Such conflicts may become entrenched in economic practices like indexation, leading to systematic adjustments in prices, wages, and rents in response to occasional inflationary shocks.

Theoretical and empirical studies on inflation suggest that its causes are complex, vary over time, and depend on a country's level of development (Acquah-Sam, 2017). As a result, understanding and forecasting inflation often requires considering a combination of these key factors. Traditional economic policies tend to focus on demand-side explanations for rising prices, while alternative approaches emphasize cost-related, institutional, and structural factors, recognizing that firms in modern economies often operate with excess capacity.

These differing perspectives have led researchers to examine the relationship between various determinants and inflation in different economic contexts—whether in underdeveloped,

developing, or developed countries. Studies have provided evidence of positive relationships between inflation and factors like money supply (Jeitziner, 1999; Asongu, 2013; De Haran & Zelhorst, 1990; Mawajja & Lwango, 2016), deficit financing (Barnhact & Darrat, 1988; Weil, 1987; Neyapti, 2003; Berdenin & Wohar, 1990; Tariq & Bibi, 2013; Nguyen, 2015), interest rates (Nguyen, 2014; Bayo, 2011; Musa et al., 2019), government spending (Dikeogu, 2018; Nguyen, 2015), and GDP (Bashir et al., 2011; Danlami et al., Adelowokan, 2012).

Most of these studies employ methodologies like the ARDL approach and VECM. This paper investigates the macroeconomic factors affecting inflation in Nepal from 1975 to 2022, using the Granger causality test. The research aims to provide new insights and knowledge that will be valuable to policymakers and other stakeholders by addressing existing gaps in the literature, specifically within the Nepalese context.

Various schools of thought have been proposed to explain the root causes of inflation in the global economy. It can be linked with the following established theories:

The classical theory, based on Fisher's quantity theory of money, argues that the quantity of the nominal money supply, which is exogenously determined, is solely responsible for changes in the general price level in an economy (Totonchi, 2011). Thus, changes in the nominal money supply directly lead to a change in the general price level in equal proportion. On the other hand, monetarists claimed that expansion of the money supply beyond the growth of real output causes inflation, which can be effectively controlled by monetary policy rather than fiscal policy. Hence, the central monetary authority should determine the growth rate of the money supply in such a way that high economic growth can be achieved by maintaining price level growth fairly at a safe level for both consumers and producers (Tolasa et al., 2022).

The fiscal theory of the price level, developed by Woodford (1994), Sims (1994), and Leeper (1991), and supported by Tiwari et al. (2012), describes policy rules such that government debt, the present and future tax and spending plans, with no direct reference to monetary policy, determine the price level. Inflation breaks out when people don't expect the government to repay its debts fully. Hence, the real value of government debt must be equal to the present value of taxes, with less spending to adjust the price level.

The demand-pull inflation theory indicates that inflation manifests when aggregate demand exceeds aggregate supply, leading to excess demand pressures. This theory implies that robust consumer spending, investment, and government expenditures can collectively contribute to an overheated economy, driving prices upward. It accentuates the role of demand-side factors in shaping inflationary trends, offering insights into the dynamics of consumption

and investment within an economy (Smith, 2016).

Contrastingly, the cost-push theory, articulated by Gordon (1985), attributes inflation to mounting production costs. Factors such as increases in wages or prices of raw materials can trigger a chain reaction, imparting business throughout the supply chain. As production costs rise, businesses may find it necessary to adjust prices upward to maintain profitability, thereby contributing to inflationary pressures. This theory sheds light on the significance of supply-side dynamics, emphasizing the role of production factors in shaping the overall price level within an economy.

Another influential perspective on inflation, popularly known as the Philip Curve, posits an inverse relationship between inflation and unemployment, suggesting that attempts to lower unemployment might lead to higher inflation and vice versa. The expected inflation rate and slope of the Philip Curve contribute to understanding the tradeoffs faced by policymakers. This theory illuminates the dedicated balance policymakers must strike when formulating economic policies, emphasizing the inherent tensions between price stability and full employment (Woodford, 2003).

A structural theory of inflation, proposed by Myrdal (1968) and Straiten (1962), analyzed inflation in developing countries, especially Latin America, in terms of structural features or bottlenecks like agricultural, infrastructural, and foreign exchange bottlenecks, government budget constraints, etc. Due to the existence of market imperfections and structural rigidities, the economies of developing countries are structurally underdeveloped and highly fragmented (Arndt, 1985). The results of these structural imbalances and rigidities create the gap between aggregate demand and supply (or shortages of supply relative to demand), underutilization of resources, and excess capacity due to a lack of demand (Canvese, 1982). Hence, the scarcity of goods and services created by structural factors as the outcome of the economic development process drives inflation.

These diverse theories collectively enrich our understanding of the multifaceted causes of inflation, offering a nuanced perspective that encompasses both demand and supply-side dynamics, as well as the intricate interplay between inflation and unemployment in the economic system.

Bane (2018) investigated the dynamics and determinants of inflation in Ethiopia using time series data by utilizing the ARDL approach with emphasis on the monetarist and structuralist views of inflation. The findings of the study revealed that inflation is significantly influenced by monetary factors, money supply, and real interest rate and structural factors,

agricultural shocks.

Chaudhary and Xiumin (2018) used the ordinary least squares method to analyze the determinants of inflation in Nepal from 1975 to 2016. The study found that the money supply and Indian prices cause inflation in the long run. The results are consistent with monetary theory.

Musa et al. (2019) estimated the impact of interest rates on inflation by employing the ARDL approach, for the period 1970–2016 in Nigeria. The results revealed that inflation is positively and significantly influenced by interest rates in both the short run and long run.

Byanjankar (2020) examined the relationship between selected macroeconomic variables and inflation by employing the ARDL approach to co-integration for the period 1975–2018. The results of the study revealed that Indian inflation, FOREX, and government deficits have a positive impact on prices in both the long-run and short-run.

Inim, Samuel and Prince (2020) investigated the determinants of inflation in Nigeria with quarterly data spanning Jan 1999 to Dec 2018 by using the ARDL method. The study found that poor infrastructural development, the exchange rate, political instability, corruption, and double taxation significantly instigate inflationary pressure. The study recommended that non-monetary factors that induce inflationary pressures must be controlled.

Yildirim (2021) examined the drivers of inflation expectations, obtained from the market participant survey in Turkey during the period 2006Q1–2021Q3. The findings of the study showed that the exchange rate, inflation expectations shock, and oil prices substantially contribute to inflation expectations in Turkey.

Duodo et al. (2022) investigated the long-run dynamics of money supply, budget deficit, and inflation by employing pairwise Granger causality and VECM on quarterly data from 1999Q1 to 2019Q4. The VECM results showed that a budget deficit has a significant positive effect on inflation while negatively affecting the money supply. On the contrary, inflation exerts a positive and negative effect on budget deficits and the money supply, respectively. The pairwise Granger causality test revealed a unidirectional causal relationship between inflation, money supply, and budget deficits.

Lauravi and Abderrahim (2022) investigated the determinants of inflation in Algeria over the 2011-2021 period using an ARDL model. The findings indicated that money supply, import price, and nominal exchange rate determine variations in the long run.

Jackson, Kamara, and Kamara (2023) examined the demand-side and supply-side determinants of inflation in Sierra Leone using monthly time series data from 2021M1 to

2021M12, with the application of the ARDL model. The empirical results showed that the exchange rate, real GDP, fiscal balance, currency in circulation, and lending rate are the main determinants of inflation in Sierra Leone in the long run.

Yahya and Pamuncak (2023) investigated the long-run determinants of inflation by employing the ARDL approach, covering the period 2014:M11 to 2023:M8 in Malaysia and Indonesia. The study demonstrated that money supply and geographical risk influence inflation in Malaysia, whereas only money supply influence drives inflation in Indonesia.

Inflation in Nepal is influenced by a combination of monetary, fiscal, structural, and external factors, which align with both theoretical and empirical findings. The classical and monetarist theories emphasize the role of money supply in driving inflation, as argued by Fisher's Quantity Theory of Money and the monetarist perspective. Empirical studies, such as those by Chaudhary and Xiumin (2018), reveal that money supply is a key determinant of inflation in Nepal, consistent with the monetary theory. Nepal's high reliance on remittance inflows, which increase liquidity in the economy, coupled with limited domestic production, often leads to inflationary pressures. Furthermore, interest rates also play a significant role, as seen in studies like Musa et al. (2019), where higher interest rates were found to drive inflation. This relationship is particularly relevant in Nepal, where weak financial systems and a lack of monetary policy transmission amplify inflationary pressures.

On the fiscal side, the fiscal theory of the price level emphasizes the role of government debt and deficits in determining inflation. Studies such as Byanjankar (2020) have shown that Nepal's government deficits, combined with external factors like Indian inflation and foreign exchange constraints, significantly impact price levels. Structural factors also play a critical role in shaping inflation dynamics in Nepal. The structural theory of inflation highlights the bottlenecks in infrastructure, agriculture, and foreign exchange as key drivers of inflation in developing economies. Nepal's economy, characterized by fragmented markets, underdeveloped infrastructure, and agricultural dependency, aligns with these structuralist views. Additionally, external factors, including exchange rates and imported inflation, are significant, as highlighted by empirical studies like Byanjankar (2020) and Jackson, Kamara, and Kamara (2023). Nepal's fixed exchange rate peg with the Indian rupee and dependence on imports, particularly from India, further exacerbate inflationary pressures, as Indian price levels directly influence domestic inflation.

DATA AND METHODS

To investigate the determinants of inflation in Nepal, this study utilizes data collected from various secondary sources. The Consumer Price Index (CPI) and Broad Money Supply (M2) have been sourced from the *Quarterly Economic Bulletin* published by the Nepal Rastra Bank. Data on Gross Fixed Capital Formation (GFCF), budget deficit and Private Consumption have been obtained from various *Economic Surveys* published by the Ministry of Finance, Government of Nepal. Additionally, data on **Indian Inflation** has been collected from the *Reserve Bank of India*. This comprehensive dataset provides a robust foundation for analyzing the key factors influencing inflation in Nepal.

This study uses the 48 annual observations from 1975 to 2022. The choice of sample period is due to capture short as well as long term dynamics of inflation. In order to study the various determinants of inflation in Nepal, the study considered five variables. The statistical and time series properties of each and every variable are examined using the conventional unit root test.

The study employs the theories of co-integration, Granger causality, and Error Correction Model (ECM) to observe the extent to which various variables under study are related to economic inflation. This procedure will help to study the long-run as well as short-run relationship between the two variables. Initially, some popular techniques, i.e., the Augmented Dickey-Fuller (ADF, 1981), have been used to check for the presence of unit roots of the concerned time series variables. These tests have been performed in the levels as well as in the first difference.

The relationship between inflation and its key determinants forms a cornerstone of macroeconomic theory and plays a critical role in the formulation and implementation of monetary policy. Accurate model specification is fundamental and constitutes the first step toward obtaining robust and reliable results. While the determinants of inflation are generally consistent across countries, variations exist in terms of their magnitude and relative importance.

The literature predominantly identifies three functional forms for modeling inflation: linear additive, log-linear, and linear non-additive. Among these, the log-linear form is widely regarded as the most suitable due to its ability to capture proportional relationships between variables effectively. This study hypothesizes that the primary determinants of inflation in Nepal are the budget deficit, gross fixed capital formation (GFCF), Indian inflation, broad money supply (M2), and private consumption.

For empirical analysis, the study employs the logarithmic transformation of annual data

spanning the period 1975–2022. If all variables used in the analysis are found to be integrated of the same order, the study proceeds with the estimation of a co-integration regression to examine the long-run relationship between inflation and its determinants. The specified functional form of the equation, with all variables expressed in logarithmic terms, is as follows: $CPI = (\text{DEFICIT}, \text{GFCF}, \text{ICPI}, \text{M2}, \text{PVTCON}) \dots (1)$

Where: DEFICIT = Budget deficit, CPI= Consumer price index, GFCF= Government fixed capital expenditure, ICPI= Indian consumer price index M2= Broad money supply, PVTCON = Private consumption expenditure.

Taking natural logs on both sides:

$$\ln CPI = \beta_0 + \beta_1 \ln \text{DEFICIT} + \beta_2 \ln \text{GFCF} + \beta_3 \ln \text{ICPI} + \beta_4 \ln \text{M2} + \beta_5 \ln \text{PVTCON} + e_t \dots (2)$$

RESULTS AND DISCUSSION

Before estimating the equation, preliminary tests were performed, namely the stationarity test and the lag length selection. The following table 1 shows the result of the unit root test. Based on the result, it can be concluded that the null hypothesis of the unit root is rejected and all the variables become stationary at the first difference, and they are integrated for order I (1). Table 2 shows the result of lag length selection and reveals from the lag length selection analysis that a lag length of 1 is optimal for series at the level in all of the above-mentioned criteria

Table 1

Unit Root Test Result

Variables	Level	First Difference
lnpci	-1.190295	-5.382070***
lndeficit	-3.019926	-6.675982***
lngfcf	-1.7848234	-6.721067***
lnicpi	-2.730776	-9.344921***
lnm2	-2.392146	-5.40898***
lnpvtcon	-2.368555	-4.021821**

Source: Author’s calculation using E-Views 10.

***, ** Rejection of null hypothesis at 1 and 5 percent level of significance, respectively

Table 2*Lag Length Selection*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	47.74331	NA	5.52e-09	-1.987777	-1.739538	-1.896787
1	313.3901	442.7447*	1.00e-13*	-12.92334*	-11.18567*	-12.28641*
2	336.1313	31.40449	2.10e-13	-12.29197	-9.064866	-11.10911
3	366.7936	33.58253	3.64e-13	-12.03779	-7.321259	-10.30900
4	418.3475	41.73409	3.37e-13	-12.77845	-6.572489	-10.50372

Source: Author's calculation using E-Views 10.

With the light of all results found in the unit root, it can be approached further for studying the long-run relationship with the cointegration technique as well as the Granger causality test. To study the long-run relationship, the Engle-Granger co-integration test has been used. Before approaching further, it is worthwhile to mention the theoretically expected signs of coefficients in the model. Theoretically, there is no unanimous relation between general price and output growth; in this study, the relationship between CPI and real GDP could be negative or positive. There are several approaches to detecting long-term relationships between variables in the model. As an example, we mention a method based on the residuals by Engle and Yoo (1987) and one based on ordinary least squares procedures modified by Phillips and Hansen (1990).

Table 3*OLS results between ln_{cpi} and $ln_{deficit}$, ln_{gfcf} , ln_{nicpi} , ln_{m2} , ln_{pvtcon}*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNDEFICIT	0.124226	0.044040	2.820768	0.0074
LNGFCF	-0.077383	0.118689	-0.651985	0.5180
LNICPI	-0.006350	0.025920	-0.244993	0.8077
LNLM2	-0.030927	0.105950	-0.291905	0.7718
LNPVTCON	0.628339	0.151295	4.153072	0.0002
C	-3.464382	1.047524	-3.307211	0.0020

Source: Author's calculation using E-Views 10.

Table 4*E-G cointegration test results*

	t-Statistic	Prob.
Augmented Dickey-Fuller test statistic	-3.919685***	0.0039

Source: Author's calculation using E-Views 10.

*** significant at the 1% level

It is noticed, the residuals appear to be $I(0)$. Thus, the null hypothesis of nonstationary with a significance level of 1% is rejected. This result indicates that real GDP and the variables are integrated, and thus there is a long-term, or equilibrium, relationship between them. So the VECM between $\ln cpi$ and other variables is performed in the next section.

Table 5*VECM Causality Results*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.008766	0.017669	0.496119	0.6227
D(LNDEFICIT)	-0.003339	0.024714	-0.135091	0.8933
D(LNGFCF)	0.030454	0.061805	0.492744	0.6250
D(LNICPI)	-0.003099	0.012039	-0.257397	0.7983
D(LNM2)	0.196332	0.087466	2.244652	0.0307
D(LNPVTCON)	0.268292	0.083255	3.222512	0.0026
ECT(-1)	-0.112218	0.070815	-1.584662	0.1213

Source: Author's calculation using E-Views 10.

*** denotes the significance of the p-value at 1%

To carry the ECM, it is checked the stationarity of the residual of the last regression model. From Table 5, it is found that the error term is stationary at the level with DF, ADF, PP, and KPSS. And once again, it can be said the two variables are co-integrated. This stationarity of the error correction term (ECT) allows us to continue the short-run analysis of the behavior of inflation using the ECM. The estimated result of the ECM is given in Table 5.

The result of ECM, especially the coefficient of the lagged ECT (-0.112218) has a negative sign, which satisfies the theoretical expectation that in the short-run the rate of inflation converges to its equilibrium point. That is, the negative coefficient of (-0.112218) says that in cases of disequilibrium, the inflation rate will back toward its long-run path. The speed of adjustment is 0.11, which is 11% each year. The coefficient of RGDP in the ECM shows the immediate impact of change in M2 to CPI; here it is 19.63% with the same sign as the first step of the Engle-Granger technique and statistically significant. On the other hand, the coefficient of PVTCON is 0.268, or 26.8%, and changes the sign, which is theoretically expected, but once again it is statistically significant. Once again, M2 and private consumption are key variables and largely explain the changes in the general price level both in the long run and short run. In both cases, its coefficient is statistically significant.

Table 6*Granger Causality Results*

Dependent Variable	Independent Variable	Lags	F stat.	Remarks
LNCPI	LNDEFICIT	1	7.76653***	DEFICIT → CPI
LNDEFICIT	LNCPI	1	7.73438***	CPI → DEFICIT
LNCPI	LNGFCF	1	0.31831	No Causality
LNGFCF	LNCPI	1	2.48237	No Causality
LNCPI	LNICPI	1	22.2541	No Causality
LNICPI	LNCPI	1	1.44101	No Causality
LNCPI	LN2	1	1.03643	No Causality
LN2	LNCPI	1	0.10401	No Causality
LNCPI	LNPVTCON	1	0.01812	No Causality
LNPVTCON	LNCPI	1	2.66524	No Causality

Source: Author's calculation using E-Views 10.

*** denotes the significance of the p-value at 1%

Table 6 reports the short-run causality test results in summary form. The results suggest that there is a strong causality running from inflation to deficit for the complete sample period. This result remains robust with the regression model. This finding is consistent with the idea that high inflation generally has a pronounced impact on deficits. When the inflation rate is high, the government attempts to extract resources from the private sector by printing money (and spending it) at a faster rate than the rate of inflation to cover the rapid loss of real revenues. This gives a strong bidirectional relationship between deficit and inflation. When the inflation rate is low, the impact of inflation on other variables is not pronounced; hence, any causality running from inflation to other variables may not be strong enough to be detected by a statistical test. As the rate of inflation in Nepal remained moderately high throughout the sample period, the impact of inflation on the deficit budget is statistically significant. However, the causality running from other variables under study to inflation is weak and remains sensitive to the lag length.

The findings of this study align with the broader literature on the determinants of inflation while also highlighting certain unique characteristics specific to Nepal. The analysis of inflation dynamics and its key determinants, drawing on both the Engle-Granger co-integration technique and VECM, provides meaningful insights into the long-run and short-run relationships between inflation and macroeconomic variables such as budget deficit, gross fixed capital formation (GFCF), Indian inflation, broad money supply (M2), and private

consumption. The literature review underscores the significance of monetary and structural factors in determining inflation. For instance, Bane (2018) and Chaudhary and Xiumin (2018) identified money supply as a primary driver of inflation, consistent with monetarist perspectives. Similarly, Byanjankar (2020) and Lauravi and Abderrahim (2022) emphasize the role of external factors, such as exchange rates and Indian inflation, in influencing domestic price levels. These findings align with this study's results, which indicate that private consumption and money supply are critical variables explaining inflationary trends in Nepal in both the short and long run. The significant role of Indian inflation in Nepal's price level dynamics further confirms the strong trade and economic interlinkages between the two countries.

The results of the Granger causality test reveal a bidirectional causality between inflation and the budget deficit, indicating a reinforcing relationship. This is consistent with the findings of Duodo et al. (2022), who observed a significant positive effect of budget deficits on inflation. The theoretical justification lies in the government's reliance on seigniorage to finance deficits during inflationary periods, leading to a self-reinforcing inflationary spiral. However, the causality from other variables to inflation is weaker, suggesting that while these factors may contribute to inflationary trends, their immediate impact is less pronounced. The error correction mechanism (ECM) further substantiates the equilibrium relationship between inflation and its determinants, with the negative and statistically significant coefficient of the error correction term indicating a convergence towards equilibrium. The adjustment speed of 11% per year suggests a relatively slow correction process, implying that inflationary shocks in Nepal persist over time, making inflation management a critical policy challenge.

A notable finding of the study is the prominent role of private consumption in driving inflation. This aligns with Jackson, Kamara, and Kamara (2023), who highlighted the demand-side determinants of inflation. In Nepal, rising consumer demand, coupled with supply-side constraints, may exacerbate price pressures, necessitating targeted policy interventions to enhance supply-side efficiency. While GFCF does not exhibit a statistically significant relationship with inflation in this study, this may reflect the long gestation period of capital investments, where their impact on inflation may manifest indirectly through productivity improvements over time. Similarly, the non-significant relationship between inflation and money supply in the short run may result from transmission lags inherent in monetary policy mechanisms, as evidenced in Musa et al. (2019).

The findings suggest that inflation management in Nepal requires a multifaceted approach. Fiscal discipline is critical to curbing budget deficits and mitigating inflationary

pressures. Additionally, monetary policy should focus on managing money supply and addressing demand-side inflation driven by private consumption. Policymakers must also remain cognizant of external factors, such as Indian inflation and exchange rate dynamics, which play a significant role in shaping domestic inflationary trends.

CONCLUSIONS

In conclusion, this study provides valuable insights into the determinants of inflation in Nepal between 1975 and 2022, revealing the significant role of both domestic and external factors. Key findings highlight the bidirectional causality between inflation and budget deficits, suggesting a self-reinforcing relationship where fiscal imbalances contribute to inflationary pressures, and high inflation exacerbates government deficits. The study also identifies private consumption and broad money supply (M2) as crucial determinants of inflation in both the short and long run. The relatively slow adjustment process, indicated by the error correction term, suggests that inflationary shocks in Nepal persist, emphasizing the need for sustained and consistent policy efforts. Moreover, the influence of Indian inflation on Nepal underscores the importance of considering external economic factors in inflation management.

The findings suggest several key policy implications for Nepal. Maintaining fiscal discipline and ensuring sustainable fiscal positions are vital to prevent inflation-deficit spirals. Policies focused on controlling private consumption and money supply can be effective tools for managing inflation. The interconnectedness with India's economy further indicates that Nepal must be proactive in monitoring external economic developments. While some variables like Gross Fixed Capital Formation (GFCF) show theoretical relevance, their limited statistical significance highlights the complexity of investment's impact on inflation, which may be indirect or delayed. Overall, the study underscores the need for a comprehensive approach to inflation management, combining monetary stability, fiscal discipline, and consideration of external influences to foster long-term price stability in Nepal.

REFERENCES

- Arndt, H. W. (1985). The origins of structuralism. *World Development*, 13(2), 151–159.
[https://doi.org/10.1016/0305-750x\(85\)90001-4](https://doi.org/10.1016/0305-750x(85)90001-4)
- Baldini, A., & Ribeiro, M. P. (2008). *Fiscal and monetary anchors for price stability: Evidence from Sub-Saharan Africa*. IMF Working Paper [wp/08/121].
- Bane, J. (2018). Dynamics and determinants of inflation in Ethiopia. In *Perspectives on*

- development in the Middle East and North Africa (MENA) region* (pp. 67–84). https://doi.org/10.1007/978-981-10-8126-2_4
- Blanchard, O. (1987). Monopolistic competition and the effect of aggregate demand. *The American Economic Review*, 77(4), 647–666
- Byanjankar, R. (2020). Determinants of inflation in Nepal: An application of ARDL bounds testing approach to cointegration. *NRB Working Paper* [WP-48]
- Chaudhary, S. K., & Xiuman, L. (2018). Analysis of determinants of inflation in Nepal. *American Journal of Economics*, 8(5), 212-221. <https://doi.org/10.5923/j.economics.20180805.01>
- Doudo et al. (2022). Money supply, budget deficit and inflation dynamics in Ghana: An empirical investigation. *Cogent Business and Management*, 9, 1-23. <https://doi.org/10.1080/23311975.2022.2043810>
- Friedman, M. (1967). *Inflation: Causes and consequences*. Asia Publishing Houses
- Inim, V., Samuel, U.E., & Prince, A. I. (2020). Other determinants of inflation in Nigeria. *European Journal of Sustainable Development*, 9(2), 338–348. <https://doi.org/10.14207/ejsd.2020.v9n2p338>
- Jackson, E., Kamara, P., & Kamara, A. (2023). *Determinants of inflation in Sierra Leone*. Bank of Sierra Leone Working Paper Series [BSL WP 02], <https://mrpa.uni-muenchen.de/117278>.
- Leeper, E. M. (1991). Equilibria under archive and ‘passive’ monetary and fiscal policies. *Journal of Monetary Economics*, 27(1), 129–147. [https://doi.org/10.1016/0304-3932\(91\)90007.13](https://doi.org/10.1016/0304-3932(91)90007.13)
- Lauravi, I., & Abderrahim, M. (2022). *Inflation dynamics and determinants in Algeria: An empirical investigation*. 1–15.
- Lin, H. P. & Chu, H. P. (2013) Are fiscal deficits inflationary? *Journal of International Money and Finance*, 32(1), 214–233. <https://doi.org/10.1016/j.jimonfin.2012.04.006>
- Musa et al. (2019). Interest rates and inflation nexus: ARDL-bound testing approach. *Journal of Economic and Sustainable Development*, 10(20), 55–65. www.iiste.org
- Neupane, D. (2022). Determinants of inflation: Evidence from Nepalese data. *Janapriya Journal of Interdisciplinary Studies*, 12, 1–12.
- Shaikh, K. A., Muhammad, F., & Khan, S. K. (2022). The dynamic theories of inflation. *Pakistan Journal of International Affairs*, 5(2), 956–971.

- Ssebuline, K., & Edward, B. (2019). Budget deficit and inflation nexus in Uganda, 1990–2016: A co-integration and error correction modeling approach. *Journal of Economics Structures*, 8(3), 1–14.
- Totonchi, J. (2011). *Macroeconomic theories of inflation*. International Conference on Economic and Finance Research, 4, 459–462.
- Van Bon, N. (2015). The relationship between fiscal deficit and inflation in developing countries: Empirical evidence based on difference panel GMM. *Asian Journal of Empirical Research*, 5(1), 128–142.
- Yahya, Y., & Pamuncak, M. B. (2023). Long-run determinants of inflation in Malaysia and Indonesia: Does geopolitical risk matter? *Journal of Sustainable Development*, 1(2), 45–57. <https://talenta.usu.ac.id/jse>
- Yildirim, M. O. (2021) What influences inflation expectations in Turkey? <https://www.researchgate.net/profile/Mustafa-Ozan->