



Inflation and Cost of Living in Nepal: A Short- and Long-Term Analysis Using ARDL Modeling

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Received: September 13, 2024, Accepted: Dec. 7, 2024

DOI: <https://doi.org/10.3126/bmcjsr.v7i1.72946>

Abstract

Inflation significantly affects the cost of living, particularly in developing nations such as Nepal. This research investigates the correlation between inflation and the cost of living, emphasizing crucial economic factors like food prices, exchange rates, and money supply, and employs the Autoregressive Distributed Lag (ARDL) model for analysis. A quantitative methodology is adopted, utilizing secondary data spanning from 1977 to 2023. The study analyzes time series data through unit root tests, ARDL bounds testing, and an Error Correction Model (ECM) to assess both short-term and long-term interactions between inflation and the Consumer Price Index (CPI). Results reveal that food prices, inflation rates, and foreign exchange rates have a significant effect on CPI in both short and long durations. Conversely, money supply and real GDP do not demonstrate significant long-term impacts on inflation. The error correction term indicates a long-term equilibrium relationship among the variables. The research recommends that regulating food prices and exchange rates may help alleviate inflationary pressures in Nepal. It also advises policymakers to prioritize price stabilization initiatives to enhance economic welfare, especially for vulnerable populations. Additionally, the study underscores the necessity of controlling inflation to foster sustainable economic development.

Keywords ARDL model, exchange rates, food prices, inflation, consumer price index

JEL classification: E31, O53, C32

1. Introduction

Inflation is a critical economic metric that significantly affects the cost of living in any economy. It influences economic stability, purchasing power, and overall quality of life in both developed and developing nations. In countries like Nepal, persistent inflation presents serious implications for household consumption and welfare. Previous research indicates that inflation can disrupt social and economic structures, fostering economic instability (Karki et al., 2020; Saungweme & Odhiambo, 2021).

Inflationary dynamics in Nepal share similarities with broader regional trends in South Asia, where economic vulnerabilities such as reliance on imports, fluctuating exchange rates, and volatile global commodity prices amplify inflationary pressures. For instance,

neighboring countries like India and Bangladesh face comparable challenges, with inflation rates influenced by both domestic policies and external market shifts (Kumar et al., 2021). This regional perspective highlights shared constraints and opportunities for collaborative policy measures, thereby contextualizing Nepal's inflationary experiences within a wider economic framework.

In Nepal, inflationary pressures are driven by external factors such as reliance on imports, fluctuating fuel prices, and global commodity price variations, particularly in food and energy. Between 1976 and 2019, Nepal's economy grew at an average rate of 4.38%, with an inflation rate of 8.12%, highlighting the complex relationship between these variables (Paudel & Raut, 2022). The country's dependence on imported goods and remittances makes the cost of living highly sensitive to external shocks, further exacerbating inflation and reducing the purchasing power of households, particularly those in low-income groups (Joshi, 2021).

The effects of inflation are multifaceted, influencing not only household finances but also broader economic factors such as employment, savings, and investment. For example, (Braumann, 2004) noted that inflation-induced declines in real wages disproportionately affect lower-income groups. (Husnain et al.(2024) and Yuliawan et al.(2024) highlighted that inflation raises production costs, potentially deterring domestic investment and hindering economic growth. In the context of Nepal, inflation is primarily demand-driven, stemming from domestic consumption and government expenditures, with cost-push elements like supply chain disruptions and agricultural shortages also playing a significant role (Dahal et al., 2024). Moreover, inflationary expectations lead to continued price increases as consumers and producers adjust their behavior in anticipation of future inflation (Gautam, 2023)

To address these inflationary pressures, a comprehensive understanding of both short-term and long-term trends is essential. The Autoregressive Distributed Lag (ARDL) model offers a robust analytical framework for this purpose (Hussein & Hmood, 2024; Ponziani, 2023). This study aims to apply the ARDL framework to elucidate the relationship between inflation and the cost of living in Nepal. By assessing both short-term and long-term effects, this model provides valuable insights into the evolution of inflation and its sustained impact on household welfare.

2. Materials and methods

Research design

This study employs a descriptive and analytical research design using quantitative methods to explore the impact of inflation on the cost of living in Nepal.

Data collection and sources

The study uses a comprehensive dataset spanning from 1977 to 2023, sourced from the Nepal Rastra Bank (NRB), including key macroeconomic variables: Consumer Price Index (CPI), Food and Beverages Price Index (FBI), Inflation Rate (INF), Foreign

Exchange Rate (FER), Real GDP (RGDP), and Money Supply (M_2). These variables were selected based on their relevance to inflation and cost of living analysis in Nepal.

Consumer price index (CPI): The CPI is the primary indicator of the cost of living, directly reflecting changes in the prices of a basket of goods and services over time. It is widely used in inflation studies to understand purchasing power and living standards (Gautam, 2023).

Money supply (M_2): M_2 is a key monetary variable that encompasses money in circulation and readily accessible forms of money, such as deposits. It is chosen due to its critical role in driving inflationary pressures through changes in liquidity and central bank policies (Joshi, 2021).

Foreign exchange rate (FER): The FER is significant in Nepal due to the country's high dependence on imports and its open economy. Fluctuations in the exchange rate affect import prices, which, in turn, influence inflation, especially for essential goods like food and energy (Paudel & Raut, 2022).

Real GDP (RGDP): RGDP is included as a measure of the overall economic output and is essential for understanding whether inflation is associated with demand-side pressures (e.g., rising economic output) or supply-side constraints (e.g., supply chain disruptions or agricultural shortages) (Dahal et al., 2024).

Inflation rate (INF): The inflation rate is essential for analyzing the overall price dynamics in an economy. It helps contextualize the relationship between monetary policy, economic activity, and the cost of living, which is central to the focus of this study.

These variables, along with their symbols, units, and sources, are listed in Table 1. By including both present and past values of these factors, the ARDL model can deliver accurate predictions for the CPI (Byanjankar, 2020; Nguyen et al., 2023; Poudel et al., 2024a)

Table 1. Variables, Abbreviations, Units and Data Sources Used in Research

Variable names	Symbols	Units	Source
Consumer Price Index	CPI	Base Year 2015=100	QEB2024,NRB
Food and Beverages Price Index	FBI	Base Year 2015=100	QEB2024,NRB
Inflation Rate	INF	Percentage (%)	QEB2024,NRB
Foreign Exchange Rate	FER	NPR. Per USD	QEB2024,NRB
Real Gross Domestic Product	RGDP	NPR. in million	QEB2024,NRB
Money Supply	M_2	NPR in million	QEB2024,NRB

Note: QEB=Quarterly Economic Bulletin, NRB= Nepal Rastra Bank

Econometric method

This study utilizes an in-depth econometric approach to examine the factors influencing the cost of living in Nepal, based on time series data.

Stationery test

The unit root test is used to determine the order of integration for the time series. For the Autoregressive Distributed Lag (ARDL) model to be applicable, the time series must be integrated at either $I(0)$ or $I(1)$. Consequently, this study employs the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests to identify the order of integration of the variables (Kharel et al., 2024; Poudel et al., 2024b; Khatri et al., 2024).

ARDL model

The Engle-Granger and Johansen models are commonly employed for co-integration tests (Poudel et al., 2024), with conventional approaches necessitating that variables be stationary at $I(1)$ and non-stationary at $I(0)$ (Pesaran et al., 2001). However, the ARDL bounds test, developed by Pesaran and Shin (1995) and further refined by Pesaran et al. (2001), enables co-integration testing without prior knowledge of the integration degree, making it suitable for non-stationary series at various levels.

ARDL bounds test

The ARDL bounds test is used to detect long-run relationships between independent and dependent variables, providing clear advantages over traditional co-integration methods (Poudel et al., 2023; Poudel et al., 2024b). This approach determines whether the data are integrated at order zero, $I(0)$, or order one, $I(1)$.

Error correction model (ECM)

The error correction form of the ARDL model captures the co-integration among variables and is analyzed using the ECM. The coefficients of the lagged values help examine short-run dynamics, offering insights into how deviations from the long-run equilibrium are corrected over time (Khatri et al., 2024; Poudel et al., 2024b).

Granger causality test

The Pairwise Granger Causality Test is used to evaluate the predictive relationships between variables. This test examines whether past values of one variable (x) can forecast future values of another variable (y), accounting for the past values of y . The methodology involves regressing y on its own lagged values and the lagged values of x . The null hypothesis states that the coefficients of the lagged values of x are jointly zero. Rejecting this null hypothesis suggests that x Granger-causes y , indicating a predictive link between the variables (Poudel 2022; Poudel, 2023).

Lag selection criteria

Selecting the appropriate lag length is crucial for time-series modeling, as it determines the number of past observations used in the model. In this study, the Akaike Information Criterion (AIC), Schwarz Bayesian Criterion (SBC), and Likelihood Ratio (LR) tests are used to identify the optimal lag length for the ARDL model.

Diagnostic tests and stability

To ensure the robustness of the ARDL model, several diagnostic tests are conducted: Jarque-bera test for normality: This test assesses whether the residuals of the model follow a normal distribution.

Breusch-Godfrey test for serial correlation: This test checks for autocorrelation in the residuals, which could invalidate the model's results.

Breusch-Pagan-Godfrey test for heteroscedasticity: This test ensures that the variance of the residuals is constant over time.

Ramsey RESET test for model specification: This test assesses whether the model is properly specified.

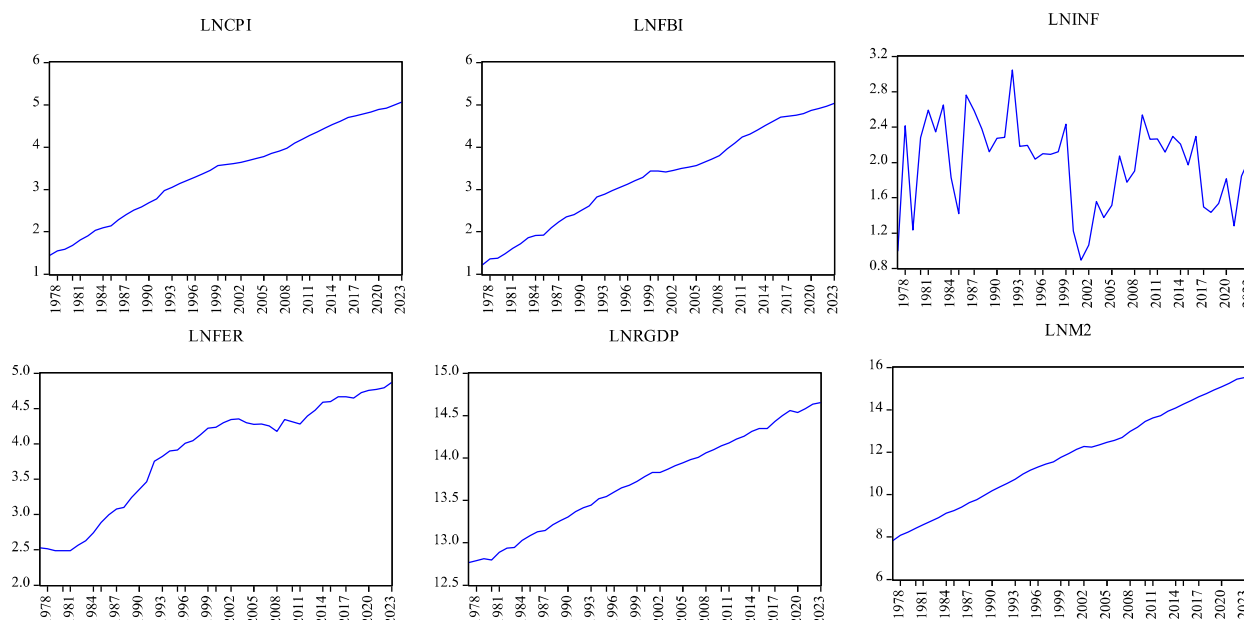
CUSUM and CUSUMSQ tests for stability: These tests check for structural stability in the model over time.

These diagnostic tests validate the reliability and robustness of the model, ensuring that the results are not biased or misleading.

3. Results

Figure 1 presents a graphical representation of the trend line associated with the study's variables. These variables encompass the Consumer Price Index (CPI), the broad money supply measured as M_2 , foreign exchange rates (FER), the inflation rate (INF), the price index for food and beverages (FBI), and the real Gross Domestic Product (RGDP).

Figure 1. Time-series plots of research variables



Unit root testing

The unit root test results from both the PP and ADF tests indicate that most of the variables are non-stationary at their level forms but become stationary at their first

differences. The results of the Phillips-Perron (PP) unit root test indicate that the variables LNCPI, LNFBI, LNFER, LNRGDP, and LNM₂ are non-stationary at their level with a constant, suggesting the existence of unit roots and long-term trends within these series. In contrast, LNINF is stationary at the level form (P-value < 0.001), indicating that inflation does not follow a unit root process and is stationary. When a trend is included, the results are consistent with the prior findings, except LNINF (P-value < 0.001). However, after taking the first difference, all variables exhibit stationarity (P-value < 0.001), supported by highly significant t-statistics and probabilities nearing zero. This suggests that differencing these variables effectively removes unit roots, thereby rendering them appropriate for further econometric analysis using models such as ARDL (see Table 2).

Table 2. Unit root test results

At Level		LNCPI	LNFBI	LNINF	LNFER	LNRGDP	LNM ₂
With Constant	t-Statistic	-2.4871	-1.7476	-4.8718	-1.2644	-0.5927	-1.024
	Prob.	0.1251	0.4012	0.0002***	0.6381	0.8622	0.7370
With Const. & Trend	t-Statistic	-1.1751	-1.6493	-5.1794	-1.0714	-2.3208	-2.2437
	Prob.	0.9038	0.7573	0.0006***	0.9229	0.4147	0.4550
At First Difference		d(LNCPI)	d(LNFBI)	d(LNINF)	d(LNFER)	d(LNRGDP)	d(LNM ₂)
With Constant	t-Statistic	-4.6526	-5.3062	-20.514	-5.2894	-8.8948	-5.1701
	Prob.	0.0005***	0.0001***	0.0001***	0.0001***	0.0000***	0.0001***
With Const. & Trend	t-Statistic	-5.081	-5.4538	-20.0935	-5.361	-9.301	-5.1653
	Prob.	0.0008***	0.0003***	0.0000***	0.0004***	0.0000***	0.0006***
UNIT ROOT TEST TABLE (ADF)							
At Level		LNCPI	LNFBI	LNINF	LNFER	LNRGDP	LNM ₂
With Constant	t-Statistic	-1.9378	-1.2697	-4.7667	-1.4546	-0.4552	-1.1356
	Prob.	0.3126	0.6355	0.0003***	0.5474	0.8905	0.6938
With Const. & Trend	t-Statistic	-1.2743	-1.5892	-5.1658	-0.6926	-2.5104	-2.1602
	Prob.	0.8816	0.7816	0.0006***	0.9676	0.3220	0.4993
At First Difference		d(LNCPI)	d(LNFBI)	d(LNINF)	d(LNFER)	d(LNRGDP)	d(LNM ₂)
With Constant	t-Statistic	-4.6407	-5.3062	-10.6205	-5.1365	-7.0556	-5.1669
	Prob.	0.0005***	0.0001***	0.0000***	0.0001***	0.0000***	0.0001***
With Const. & Trend	t-Statistic	-5.081	-5.4282	-10.4601	-5.3312	-7.1	-5.159
	Prob.	0.0008***	0.0003	0.0000***	0.0004***	0.0000***	0.0006***

Note: ***= significant at 1% significance level

VAR lag order selection criteria

The process of determining lag order is essential for establishing the suitable number of lags to be incorporated in a time-series model, such as Vector Autoregression (VAR) or Autoregressive Distributed Lag (ARDL) models, in order to effectively capture

the dynamic relationships among variables. The analysis indicates that a lag length of 1 is deemed optimal, as evidenced by the minimal values for AIC (-22.63071), SC (-20.92762), HQ (-21.99912), and FPE (6.08e-18), alongside a notable LR statistic (587.9831) for lag 1.

Table 3. VAR lag order selection criteria results

Lag	LogL	LR	FPE	AIC	SC	HQ
0	190.2639	NA	9.28e-12	-8.375633	-8.132335	-8.285406
1	539.8755	587.9831*	6.08e-18*	-22.63071*	-20.92762*	-21.99912*
2	560.4557	28.99932	1.34e-17	-21.92980	-18.76692	-20.75685
3	584.0790	26.84463	3.04e-17	-21.36723	-16.74455	-19.65292

ARDL long-run form and bounds test

In the ARDL framework, the co-integrating equation represents the long-term relationship among the examined variables. This equation is identified when co-integration is confirmed, indicating that the variables exhibit a shared stochastic trend (Poudel, 2023). To explore these long-term relationships in greater depth, the ARDL Long-run Form and Bounds Test are conducted (see Table 4).

Table 4. ARDL Long-run form and bounds test

Test Statistic	Value	Significance level	I(0)	I(1)
Asymptotic: n=1000				
F-statistic	30.83224			
k	5	5%	2.39	3.38
Actual Sample Size 46			Finite Sample: n=50	
		5%	2.67	3.781
			Finite Sample: n=45	
		5%	2.694	3.829

The long-run relationship between the LNCPI and LNFBI, LNFER, LNINF, LNM₂, and LNRGDP was investigated using an ARDL model with the specification ARDL (1, 1, 1, 0, 0, 0). The analysis revealed that increases in LNFBI, LNFER, and LNINF significantly raise LNCPI, with coefficients of 0.5613, 0.1932, and 0.2842, respectively, while M₂ and RGDP did not show significant effects. The error correction term (EC) confirmed a long-run equilibrium relationship among these variables, the model is calculated as

$$EC = LNCPI - (0.5613LNFBI + 0.1932LNFER + 0.2842LNINF - 0.0116LNM_2 + 0.5156*LNRGDP - 2.7409)$$

The F-Bounds test, with an F-statistic of 30.83224, exceeded the critical values at all

conventional significance levels, indicating a significant co-integrating relationship and validating the long-run dynamics among the variables (see Table 5).

Table 5. Long-run coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNFBFI	0.561333	0.158912	3.532348	0.0011
LNINF	0.284172	0.135593	2.095764	0.0430
LNFER	0.193244	0.059002	3.275203	0.0023
LNRGDP	0.515597	0.349858	1.473734	0.1490
LNM ₂	-0.011628	0.118955	-0.097748	0.9227
C	-6.302528	3.675125	-1.714915	0.0947

Short-run coefficients

Findings suggest that short-term variations in the Food and Beverages Price Index (D(LNFBFI)) and Foreign Exchange Rate (D(LNFER)) have a substantial positive significant effect on the dependent variable, with coefficients of 0.279 and 0.077, respectively. This indicates the immediate impact of fluctuations in food prices and currency rates on economic conditions. The cointegration error term (CointEq(-1)*) reveals a notable adjustment coefficient of -0.130, implying that the model effectively rectifies deviations from long-term equilibrium. The model's strong fit and accuracy are further supported by a high R-squared value of 0.969 and a low standard error of regression, while the Durbin-Watson statistic of 1.809 suggests that there is no significant autocorrelation in the residuals, thereby ensuring appropriateness of short-run dynamics (see Table 6).

Table 6. Short-run coefficients (Case 2: Restricted constant and no trend)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNFBFI)	0.279403	0.035027	7.976739	0.0000
D(LNFER)	0.076723	0.014558	5.270134	0.0000
CointEq(-1)*	-0.129919	0.008203	-15.83744	0.0000
R-squared	0.969252	Mean dependent var		0.078519
Adjusted R-squared	0.967821	S.D. dependent var		0.034169
S.E. of regression	0.006129	Akaike info criterion		-7.288448
Sum squared resid	0.001615	Schwarz criterion		-7.169189
Log likelihood	170.6343	Hannan-Quinn criter.		-7.243773
Durbin-Watson stat	1.809433			

Granger causality test

In the ARDL framework, the Granger Causality Test is a common method used to assess causal relationships among the model's variables. A significant result from this

test suggests that historical values of the proposed predictor variable provide useful information for forecasting the dependent variable (Poudel et al., 2024).

Table 7. Granger causality test results

Null Hypothesis	Observations	F-Statistic	Prob.
LNINF \rightarrow LNCPI	46	3.46703	0.0694
LNCPI \rightarrow LNINF		3.83720	0.0566
LNCPI \rightarrow LNRGDP		12.2011	0.0011
LNFBFI \rightarrow LNINF		3.81669	0.0573
LNFBFI \rightarrow LNRGDP		12.5632	0.0010
LNFER \rightarrow LNINF	46	5.14174	0.0284
LNRGDP \rightarrow LNINF	46	3.33987	0.0746
LNINF \rightarrow LNRGDP		3.35038	0.0741
LN M_2 \rightarrow LNINF	46	3.40732	0.0718
LNINF \rightarrow LN M_2		3.04503	0.0881
LN M_2 \rightarrow LNRGDP	46	11.3270	0.0016

Findings suggest that LNCPI predicts LNINF, but the reverse does not hold. Furthermore, LNCPI appears to Granger-cause Real GDP (LNRGDP), indicating that fluctuations in consumer prices could affect economic output. However, there are no notable Granger-causal relationships identified between the Food and Beverages Price Index (LNFBFI) and LNCPI, the Foreign Exchange Rate (LNFER) and LNCPI, or the Money Supply (LN M_2) and LNCPI. It is important to highlight that LNINF Granger-causes LNFER, while LNRGDP Granger-causes LN M_2 , suggesting that changes in inflation rates and economic output can be used to predict alterations in exchange rates and money supply, respectively (see Table 7).

Diagnostics and stability tests

Table 8. Diagnostics and stability tests

Diagnostics	Statistics	p-value
Normality(J-B)	2.411528	0.299463
Serial Correlation $\chi^2(2)$	0.122772	0.7260
B-P-G Test(Scaled explained SS)	14.08421	0.0796
Ramsey RESET(F_{STAT})	2.054267	0.1604

Source: Author's calculations performed using E-Views

The Jarque-Bera test is used as a diagnostic tool for regression analysis, indicating the residuals adhere to a normal distribution, evidenced by a p-value of 0.2995, which supports the application of inferential statistics (see Figure 2). The Breusch-Godfrey test for serial correlation reveals no signs of autocorrelation, with a p-value of 0.7260,

further validating the independence of residuals, as illustrated in Table 9. Additionally, the Breusch-Pagan-Godfrey test for heteroscedasticity yields a p-value of 0.0796, suggesting that the residuals maintain a constant variance (see Table 10). Moreover, the Ramsey RESET test, showing a p-value of 0.1604, implies that the model is specified correctly (see Table 11). The CUSUM and CUSUMQ tests, which evaluate model stability, involve plotting the cumulative sum of recursive residuals within 95% confidence bounds. The resulting plots affirm that the model exhibits stability over time (see Figure 3&4). Collectively, these diagnostic findings affirm the model’s robustness and reliability.

Figure 2. Jarque-bera normality test

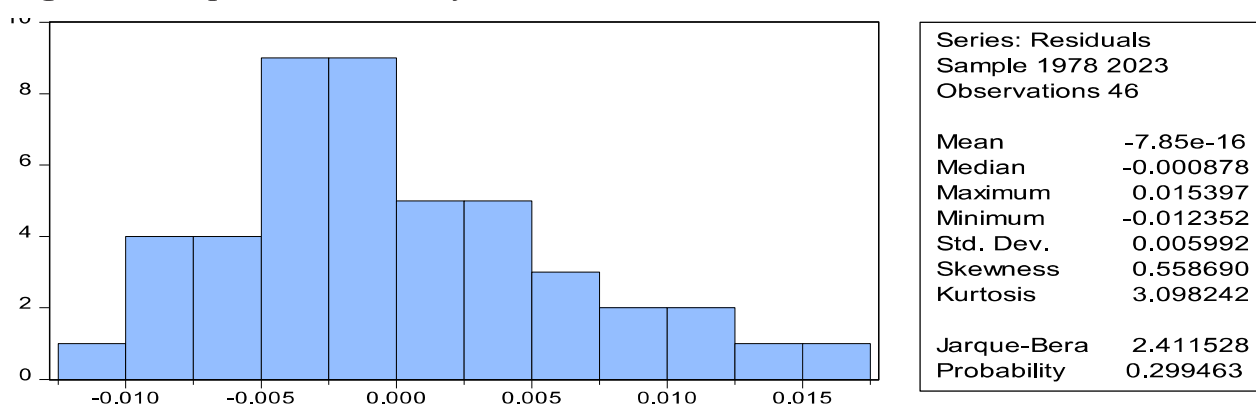


Table 9. Breusch-Godfrey serial correlation LM test

F-statistic	0.096340	Prob. F(1,36)	0.7581
Obs*R-squared	0.122772	Prob. Chi-Square(1)	0.7260

Table 10. Heteroskedasticity test: Breusch-Pagan-Godfrey

F-statistic	3.800759	Prob. F(8,37)	0.0024
Obs*R-squared	20.75005	Prob. Chi-Square(8)	0.0078
Scaled explained SS	14.08421	Prob. Chi-Square(8)	0.0796

Table 11. Ramsey RESET test

	Value	df	Probability
t-statistic	1.433272	36	0.1604
F-statistic	2.054267	(1, 36)	0.1604
F-test summary:			
	Sum of Sq.	df	Mean Squares
Test SSR	8.72E-05	1	8.72E-05
Restricted SSR	0.001615	37	4.37E-05
Unrestricted SSR	0.001528	36	4.25E-05

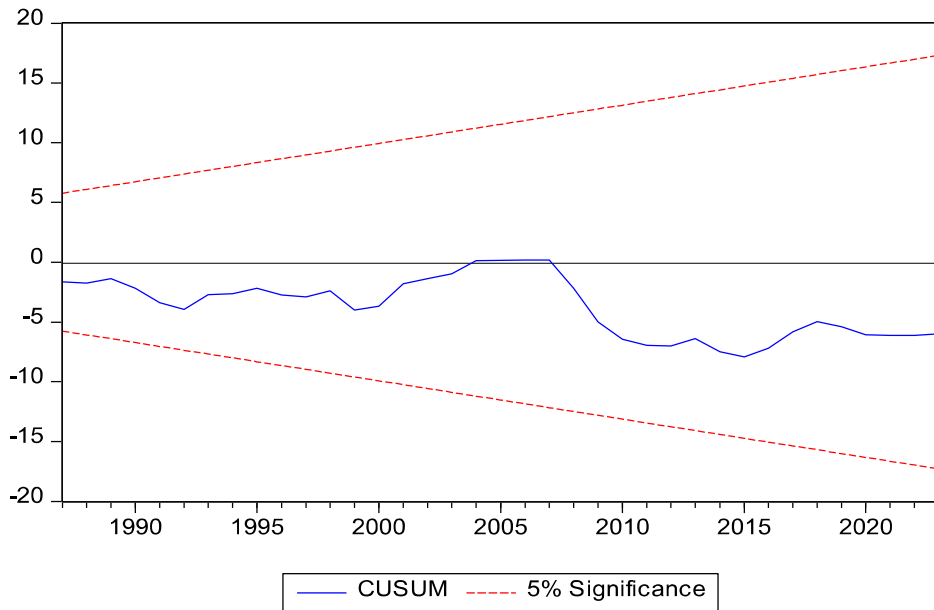


Figure 3. CUSUM test

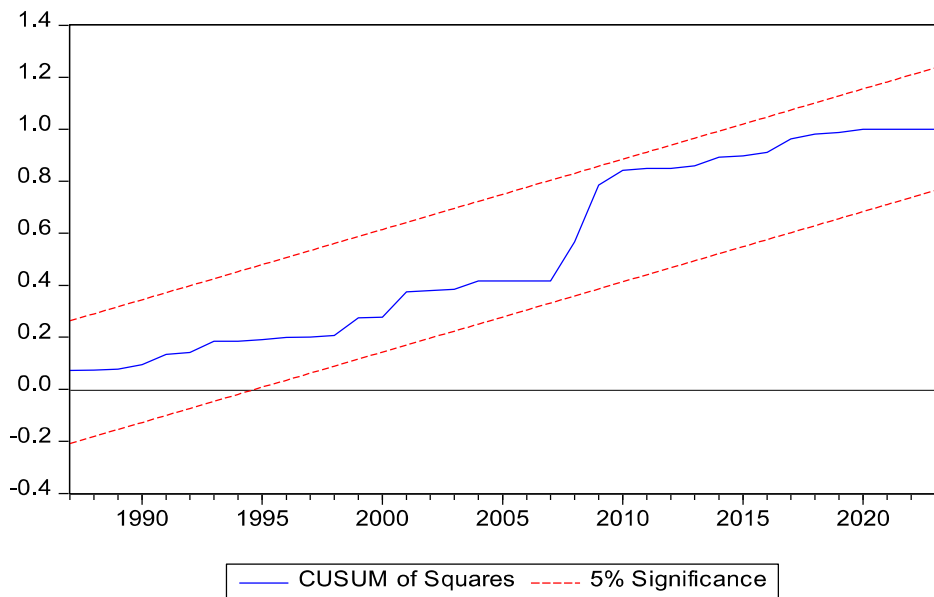


Figure 4. CUSUM of squares test

4. Discussion

The results reveal that while food prices, exchange rates, and inflation rates significantly affect the Consumer Price Index (CPI) in both the short and long term, the money supply (M_2) and real GDP (RGDP) show limited long-term effects on inflation in Nepal. This is a critical finding, as money supply and GDP growth are traditionally considered key drivers of inflation in most economies (Paudel & Raut, 2022).

The limited long-term impact of money supply (M_2) on inflation in Nepal can be explained by several interrelated factors. First, monetary policy in Nepal faces constraints due to

the country's heavy reliance on external factors, such as international remittances and the import-dependent nature of its economy. As Paudel and Raut (2022) note, Nepal's financial markets are relatively underdeveloped, and the NRB has limited control over liquidity and inflationary pressures. While increases in M_2 can lead to inflation in some contexts, in Nepal, these effects are muted because inflation is primarily driven by external factors like global commodity prices and exchange rate fluctuations (Joshi, 2021).

Furthermore, a significant portion of the money supply in Nepal is influenced by remittances, which primarily fuel consumption of imported goods rather than stimulating domestic demand for locally produced goods or services (Gautam, 2023). As Joshi (2021) points out, remittances help maintain household income but contribute less to inflationary pressures since much of this money is spent on imports, which are more directly influenced by external price changes than domestic money supply growth.

Similarly, RGDP shows no significant long-term impact on inflation in Nepal. One reason for this is the supply-side constraints that limit the ability of GDP growth to translate into inflationary pressures. Despite modest economic growth in recent decades, Nepal struggles with infrastructural bottlenecks, agricultural inefficiencies, and limited industrial output, which hinder the production of goods and services that could meet rising demand (Dahal et al., 2024). As a result, even when the economy grows, the additional demand is not sufficiently met by domestic production, and inflationary pressures do not rise correspondingly.

Moreover, external factors such as exchange rate fluctuations and import prices play a more dominant role in shaping inflation than domestic economic growth. As Paudel and Raut (2022) observe, Nepal's inflation is largely driven by the price of imports, particularly essential commodities like food and fuel. Since the exchange rate and international commodity prices are more volatile than domestic GDP growth, they exert a stronger and more immediate influence on inflation. In fact, fluctuations in the foreign exchange rate (FER) directly affect the cost of imports, which in turn influences the cost of living in Nepal (Paudel & Raut, 2022).

Finally, the relationship between GDP growth and inflation in Nepal is also weak because inflation in the country is predominantly demand-pull in nature, driven by external shocks rather than domestic economic growth. Studies by Karki et al. (2020) and Dahal et al. (2024) have indicated that inflation in Nepal is often exacerbated by global factors, such as changes in international food prices and energy costs, which are beyond the control of the country's monetary and fiscal policies.

These findings are consistent with research in other developing economies. For instance, Ethiopian studies (Bekele, 2023) and Indonesian research (Saputro et al., 2022) have also shown that while money supply and GDP growth are typically associated with inflation, their long-term effects are limited due to structural constraints, external shocks, and an economy's reliance on imports. Additionally, the results underscore

the necessity of controlling food prices and exchange rates to alleviate inflationary pressure on households, particularly those with lower incomes. Although this study utilized key economic indicators to analyze their influence on CPI using the ARDL model, other methodologies such as ARIMA and ANN could also be employed for comparison purposes. In summary, this study highlights the interrelated nature of critical economic variables and underscores the importance of specific policy measures aimed at managing inflation and stabilizing living costs in Nepal.

5. Conclusion

This study examines the impact of inflation on the cost of living in Nepal, using the Autoregressive Distributed Lag (ARDL) model. The findings show that food prices, exchange rates, and inflation rates significantly affect the Consumer Price Index (CPI), while money supply (M_2) and real GDP (RGDP) have limited long-term effects on inflation. Inflation in Nepal is largely driven by external factors such as global commodity price fluctuations and exchange rate movements. To address inflation, several policy interventions are recommended. First, exchange rate stabilization is critical. Second, reducing Nepal's reliance on imports by promoting domestic production is crucial. The government should invest in agriculture and infrastructure to boost local production and make domestically produced goods more competitive. This will help buffer the economy from global price fluctuations. While money supply (M_2) has limited long-term effects, monetary policy should remain flexible to manage short-term inflationary pressures. The NRB can adjust interest rates or other tools to control liquidity during inflation spikes caused by external shocks. Additionally, adopting an inflation targeting framework and establishing a price monitoring system for essential goods can help the government track and stabilize prices effectively. Strengthening social safety nets such as cash transfers and food assistance will protect vulnerable households from rising living costs. While external factors play a significant role in inflation, targeted policy measures like exchange rate stabilization, boosting domestic production, and strengthening social safety nets can help control inflation and improve economic welfare in Nepal.

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