

Nexus between Inflation, Economic Growth and Government Expenditure of Nepal

Gyan Mani Adhikari¹

Santosh Chhetri²

Bhawana Basnet³

Abstract

In the context of Nepal, this study will explore the relationship between the rate of inflation, economic growth, and government spending. Government spending has been broken down in this analysis into three categories: government recurrent expenditure, government capital expenditure, and government financing expenditure. The time series data from 1974 to 2021 are used in the investigation. The econometrics tools used to analyze this link are the Granger-causality test, ARDL, Johansen co-integration, and the Augmented Dickey-Fuller (ADF) unit root test. The outcomes of using these econometric techniques reveal a long-term relationship between the rate of inflation, economic growth, and government spending, which indicates that public spending has beneficial externalities and links. In the short run, government spending has a greater impact on economic growth than the rate of inflation. The results of the causality test indicate that there is a one-way causal relationship between the rate of inflation and both economic growth and government spending.

Keywords: Inflation; economic growth; government expenditure; ARDL;

JEL Classification: E31, E62

Introduction

Inflation is typically a broad measure of the overall increase in prices of goods and services and thereby increases in the cost of living in a country. Inflation represents how much more expensive the relevant set of goods and/or services has become over a certain period, most commonly a year (Oner, 2017). GDP is the monetary value of all the finished goods and services produced within a country's borders in a specific time period. GDP includes

all private and public consumption, government outlays, investments, private inventories, paid-in construction costs, and foreign trade that is exports are added, and imports are subtracted. Put simply, GDP is a broad measurement of a nation's overall economic activity. Economic growth is the basic parameter for the improving living standards, employment as well prosperity of a nation and is typically measured with respect to the GDP of the country. Government expenditure

*1. Mr. Adhikari is a Reader at Central Department of Management at CDM.

*2. Mr. Chhetri is a researcher in the Field of Management and Economics.

*3. Mr. Basnet is a researcher in the Field of Management and Economics.

is the distribution and use of the funds to the government finance which has expanded so as to meet the requirements of economic structure and different causes. The importance and magnitude of government expenditures stimulate a great deal of polemic in macroeconomics. The relationship between inflation and economic growth is one of the most popular macroeconomic issues among national planners, policymakers, central bankers, and macroeconomists (Barro, 1995). There exists a large debate on the relationship between these two macroeconomic variables both theoretically and empirically. The level at which prices of goods and services increase and the relative purchasing power of people decreases is called inflation, while economic growth measures the level of increase in the capacity of an economy to produce goods and services, compared from one period of time to another and it is conventionally measured as the percent rate of increase in real Gross Domestic Product or real GDP. The fundamental objective of macroeconomic policies in both developing and developed countries is to sustain high economic growth together with very low inflation (Chimobi, 2010). A high inflation rate is and could hardly be favorable to economic growth (Niyimbanira, 2013). The structuralists believe that inflation is essential for economic growth, whereas the monetarists see inflation as detrimental to economic progress (Mallik, 2001).

Mild inflation is considered to be desirable for economic growth. However, high and variable inflation distorts the smooth functioning of the economy (NRB,

2007). High and persistent inflation and low economic growth have been major characteristics of the Nepalese economy in recent years. In the last five years, the average inflationary rate was recorded at 8.8 percent which was higher than the projected inflation by 1.3 percent. Inter-country comparison of inflation in the SAARC countries also shows that Nepal has the highest rate of inflation except Bhutan and Pakistan. So, it is necessary to study the trend, structure, and pattern of inflation in Nepal in the present. It is also necessary to examine the major determinants of Inflation in Nepal. Because today's Nepalese economy is not a closed economy (MoF, 2016). Government expenditure is the end and purpose of the collection of a country's revenue. Government spending has been an element of fiscal policy which is an instrument of the country to stimulate economic growth. Economic growth is an indicator of the economic performance of a nation which is presumed to be an objective of the countries anticipating its impact in improving living standards, generating employment, and overall reforms of the country (Lahirushan & Gunasekara, 2015). The association between the size of government and economic growth has been a typical concern. The modern government not only performs primary functions but also takes an interest in promoting the economic development of their respective countries. The fiscal policies are purposefully intended to regulate and stabilize the economy through different forms of taxes and expenditures. The economic policies incorporate government policies for creating revenue basically

through taxation and its successive policies for making decisions on how the conforming revenue that is generated would be distributed for reaching besieged economic goals (Onifade, et al. 2020). The government expenditure of Nepal from the treasury is sub-grouped into Recurrent, Capital, and Financing expenditure. The pattern of government spending in Nepal seems to be focused on regular expenditure and widening the budget deficit of Nepal each and every year. The track of capacity of government expenditure utilization has mostly found less efficiency which has the historical tendency of the Nepalese government. As per the size of the economic expansion, the gap of fiscal deficit has been expanding in Nepal. According to the Keynesian school, aggregate demand rises through an increase in consumption and investment in both public and private sectors. Given the inelasticity of aggregate supply in the short-run, an increase in aggregate demand leads to higher prices. In terms of aggregate supply, if the government borrows more by issuing bonds to finance its public spending, interest rates will rise, lowering private consumption and investment and, therefore, output. This crowding-out effect may fully or partly offset any expansionary effect that public spending may have on the economy. Output growth can affect both government spending and inflation. As output or income per capita increases, private consumption may rise depending upon the marginal propensity to consume of consumers. Public consumption may also rise as government expands to meet the higher demand for public services by the private sector. As a result, prices may increase to a high level.

Review of Literature

Over the past few decades macroeconomists are divided over whether inflation is conducive or constraint to economic growth in developed and developing countries alike. The contention arises from two different schools of thought existing in the field: structuralists and monetarists. Both schools of thought have profound effects on the policies adopted by the policy-makers in general and central banks in developing countries as well as developed countries alike.

Mundel (1965) and Tobin (1965) estimated a positive relationship between the inflation rate and the rate of capital formulation, which, on the other hand, indicates a positive relationship between inflation and economic growth. They claim that when inflation rises a shift in portfolio from money to capital will consequently accelerate the pace of economic growth (Gregorio, 1996). Conversely, Fischer and Modigliani (1978) suggest a negative nonlinear relationship between inflation and economic growth. They come to this conclusion through the growth theory mechanism (Malla, 1997).

Many studies have shown that inflation and economic growth have a negative relationship. A classic Barro (1995) paper along with Burdekin (2000), and Wallich (1969) shows the harmful effect of rising inflation. In some cases, the relationship is somewhat fuzzy and positive to a certain threshold and negative beyond the threshold mentioned. Pollin (2006), Chawdhary (2001), Ahmed (2005), Burdekin et al. (2000), Dorrance (1966), Bruno et al. (1995), and Mubarik (2005)

found a positive relationship between inflation and economic growth to a certain threshold and negative one beyond the threshold.

As Sarel (1996) writes: the view that prevailed (until 1970s) in the economic profession was that the effect of inflation on growth was not particularly important. Many studies have found this effect to be non-significant, and in fact, some found it to be positive. In general, the empirical evidence was, at best, mixed. The change in view came only after many countries experienced severe episodes of high and persistent inflation in the 1970s and 1980s. These high inflation episodes were usually associated with a general decline in macroeconomic performance and with a balance of payments crisis.

An evidence from Bangladesh shows a long run negative relationship between inflation and economic growth. Ahmed et al. (2005) estimate a 6% threshold level of inflation above which inflation adversely affects economic growth. The study suggests that such inflation will have an adverse impact on the purchasing power of the people and resulting overall deterioration of the standard of living.

Similarly, Burdekin et al. (2000) estimate that an increase in the inflation rate of 1% would lower the growth rate by about 0.3 %. When the inflation rate exceeds 25%, the estimated coefficient of inflation is negative and significant with an even higher magnitude of -1.713. It is also noticeable from the study that the marginal costs of inflation for industrial countries are rising as the inflation rate

increases. Fischer's (1993) study also upholds the conventional view that a stable macroeconomic environment, which primarily includes inflation, is conducive to sustained economic growth. In addition, Fischer finds that inflation reduces growth through investment.

The adverse effect of inflation on economic growth is conspicuous and well manifested by Wallich (1969), using the data from 18 industrial and 25 developing countries over the period of 1956-65. The study found a significantly negative relationship between inflation and economic growth. The effect of inflation on economic growth through investment was shallow. The larger parts were operated through other channels which included quality, distribution, and cost of investment.

Some studies show that inflation is not an adversary to economic growth to a certain threshold. Pollin (2006) using the data set of 80 countries between 1961 and 2000, finds that higher inflation is associated with moderate gains in GDP growth up to a roughly 15-18 percent inflation threshold.

In this connection, the findings of Chowdhury et al. (2001) are remarkable in the sense that they find a clear positive relationship between inflation and economic growth. Using the data from four South Asian countries (India, Pakistan, Bangladesh, and Sri Lanka) found a positive relationship for the same. On the other hand, they also notice that the sensitivity of inflation to growth is higher than the growth to inflation. It implies that attempts to reduce inflation to a very

low level are likely to adversely affect economic growth. However, they urge that attempts to achieve faster economic growth may overheat the economy to the extent that the inflation rate becomes unstable.

Similarly, Dorrance (1966) studied 48 countries, both developing and industrial over the period of 1953-61 and found that mild inflation, in fact, helped the economy to grow, excluding the evidence from developing countries. The study also supports the notion that mild inflation is, indeed, conducive to economic growth. After a certain threshold, however, rate of inflation turned out to be discouraging to growth.

Talking about the benign level of inflation, even if it is double-digit, Bruno et al. (1995) reveal that countries can manage to live with moderate—around 15-30 percent— inflation for long periods. They put forward Colombia as a classic example. But, they urge that no countries manage to keep stable or otherwise live with higher rates of inflation. After the 1950s, attempts have been made to examine the association between inflation and economic growth using international data. Threshold calculation of inflation has been a major development in analyzing the relationship between inflation and economic growth. It has turned out to be an important guide for policymakers.

Burdekin (2000) comes up with different impacts of inflation on different threshold levels of inflation. When the inflation rate is below 3% threshold level, the coefficient on inflation is positive and highly

significant. This is to imply that at such a low inflation rate, economic growth will be positively affected. But, when the inflation rate is between 3% and 50%, the economic growth will be adversely affected.

Aghevli (1978) analyzes the relationship between economic growth and inflation through government spending. The findings show that in developing countries fiscal policy tends to be automatically destabilizing, the most important one is revenue lag. Aghevli suggests an active fiscal policy to stabilize the economy by eliminating budgetary deficits and even surpluses, if possible. Reshaping the revenue system to eliminate lags is also recommended.

Methodology and Model

This study builds on the work of Atesoglu, 1998; and Mallik and Chowdhury, 2002 by considering the Nepalese perspective. This study also investigates the same relationship among the real GDP, rate of inflation, and government expenditure, and follows the same function form as by Atesoglu, 1998; and Mallik and Chowdhury, 2002:

$$\ln Y_t = f(\Delta \ln P_t, \ln G_t) \tag{3.1}$$

Where,

$\ln Y$ = The natural log of real GDP

$\Delta \ln P$ = the rate of inflation by taking the first difference of natural log CPI

$\ln G$ = The natural log of government expenditure

the equation (3.1.1) shows describes the relation give below

$$\ln Y_t = \beta_0 + \beta_1 \Delta \ln P_t + \beta_2 \ln G_t + \mu_t \tag{3.1.1}$$

Where β_0 is one of the constant, β_1 and β_2 are the slope parameters μ_t is the regression error term. This study has also divided the government expenditures into government recurrent expenditures; and government capital expenditures, according to the Economic Survey of

Nepal, 2020/2021. First, the individual effect of both expenditures has been tested; and secondly, the combined effect of both expenditures has been taken by using the same equation (3.1). The three different equations (named as 3.1.2, 3.1.3 and 3.1.4) are derived as follow:

$$\ln \ln Y_t = \beta_0 + \beta_1 \Delta \ln P_t + \beta_2 \ln GR_t + \mu_t \tag{3.1.2}$$

$$\ln \ln Y_t = \beta_0 + \beta_1 \Delta \ln P_t + \beta_2 \ln GC_t + \mu_t \tag{3.1.3}$$

$$\ln Y_t = \beta_0 + \beta_1 \Delta \ln P_t + \beta_2 \ln GR_t + \beta_2 \ln GC_t + \mu_t \tag{3.1.4}$$

Where;

$\ln GR$ = the natural log of real government recurrent expenditure

$\ln GC$ = the natural log of real government Capital expenditure

The AIC lags criterion has been used in the ARDL model. The variables of real gross domestic product (Y), government expenditure (G), government recurrent expenditure (GR), and government capital expenditure (GC) are measured in local monetary units (Rs.). The variable of rate of inflation (P) is measured in percentage change of log of consumer price index

(CPI). The data for the all the economic variables has covered the period of 1987 to 2021 and has been taken from the Ministry of Finance database (2022).

Analysis and Discussion

In the first step, the ADF Unit Root test has been used to check that the economic variables are stationary. The ADF test includes constant with no trend at level I(0), and first difference I(1) of variables. The lag differences (k) are chosen according to the Schwarz Info Criterion (SIC). The test results are shown in Table 1:

Table 1*ADF Unit Root Test Statistic: Nepal 1974 – 2021*

Variable	Level I(0) No trend	K	Level I(1) No Trend	K
Ln(Y)	-1.87	0	-6.25*	0
Ln(P)	-4.97	0	-9.08**	0
Ln(G)	-2.34	0	-4.92*	0
Ln(GC)	-2.66	0	-5.20*	0
Ln(GR)	-1.92	0	-6.73*	0

* and ** denotes MacKinnon critical values 1% and 5% significance at the level respectively.

The test result shown in Table 3, indicates that the time series data at level I(0) is nonstationary at 1% and 5% level of significance at different lags. The deterministic trend means that the time series is now completely predictable and not variable. So, all the times series of the variables are stationary, this implies that all the shocks that would be temporary

and their effects would be eliminated over time as the series regress to their long term variance. After finding all the economic variables that are integrated at the order I(0) and order I(1), the second step of the ARDL cointegration test has been employed by the selection of the VAR optimal lag orders.

Table 2(a)*Test Statistics and VAR Lag Order Selection Criterion of Model: (3.1.1 Endogenous Variables)*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-89.95645	NA	0.012498	4.131398	4.251842	4.176298
1	97.66706	341.8917*	4.46e-06*	-3.807425*	-3.325648*	-3.627823*
2	103.9873	0.67426	5.06e-06	-3.688326	-2.845217	-3.374024

Table 2(b)*Test Statistics and VAR Lag Order Selection Criterion of Model: (3.1.2 Endogenous Variables)*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-122.4195	NA	0.052897	5.574202	5.694646	5.619102
1	70.45386	351.4582*	1.50e-05*	-2.597949*	-2.116173*	-2.418348*
2	72.56912	3.572447	2.04e-05	-2.291961	-1.448852	-1.977658

Table 2(c)*Test Statistics and VAR Lag Order Selection Criterion of Model: (3.1.3 Endogenous Variables)*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-128.7265	NA	0.070011	5.854512	5.974956	5.899412
1	56.66754	337.8292*	2.76e-05*	-1.985224*	-1.503447*	-1.805622*
2	63.09133	10.84908	3.11e-05	-1.870726	-1.027617	-1.556423

Table 2(d)*Test Statistics and VAR Lag Order Selection Criterion of Model: (3.1.4 Endogenous Variables)*

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-131.9859	NA	0.004954	6.043820	6.204412	6.103687
1	96.55474	406.2945*	3.93e-07*	-3.402433*	-2.599472*	-3.103097*
2	63.09133	10.84908	3.11e-05	-1.870726	-1.027617	-1.556423
2	111.4336	23.80615	4.20e-07	-3.352604	-1.907274	-2.813799

*denotes lag order selected by the criterion; LL: log likelihood; LR: log likelihood ratio; FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion.

In order to select the optimal lag order for the VAR from the above Table 2 (a), (b), (c), (d), it is important to select high enough order to ensure that the optimal order will not exceed it. The three VAR of order two have been calculated over the time period of 1974 to 2021. However, AIC criteria implied that the order is 1. The log likelihood ratio statistics, whether adjusted for small sample or not, rejected order 0, but did reject a VAR of order 1. In the light of above statistics it has been decided to choose VAR (1) model. After

finalizing the selection of the VAR optimal lag orders, the third step of the ARDL cointegration test has been established of a long run relationship (cointegration) among the variables through F-test statistics by applying Bound Test. In the first stage, OLS is calculated to measure the long run relationship. At the second stage, F-statistics have been calculated by applying the Wald test on the estimation of OLS calculated at the first stage. The result of this step has been shown in Table 3:

Table 3*Wald Test: Nepal 1974 to 2021*

Model	F statistic	P value
3.1.1	7290.128	0.00
3.1.2	245.40	0.00
3.1.3	421.72	0.00
3.1.4	576.06	0.00

Table 3 shows that F-statistic for order of lag one turned out to be significant at 5% level. The result implies the evidence that there is a strong long run relationship among the variables of the entire models. After finding the long relationship among the variables, the fourth step is to estimate the long run and the short run coefficients. In the first stage, the long run coefficients

have been estimated by using the OLS technique. The results of the long run estimates are shown in Table 4:

Table 4*ARDL Model Long Run Estimates: Nepal 1974 – 2021*

Model	Long run estimates
3.1.1	$\ln Y = 0.43^* - 0.002^{**} \Delta \ln P + 0.15^* G$
3.1.2	$\ln Y = 0.14^* - 0.013^{**} \Delta \ln P + 0.14^* GR$
3.1.3	$\ln Y = 0.056^* - 0.0139^{**} \Delta \ln P + 0.152^* GC$
3.1.4	$\ln Y = 0.17^* - 0.142^{**} \Delta \ln P + 0.20^* GR + 0.05^* GC$

** indicates 10% Level of significance; * indicates 5% level of significance

The results that are presented in above Table 6 show that there is negative coefficient of rate of inflation, which is statistically significant. The coefficient of government expenditure is statistical positively significant. In models the coefficient of government recurrent expenditure and government capital expenditure statistically insignificant.

As the long-run estimates have been calculated, the short run (ECM) coefficients have been estimated in the next stage. The estimated results of ECM allow measuring the speed of the adjustments required to adjust to long run values after a short term shock. The short run results are shown in Table 5:

Table 5*ARDL Model ECM Estimates: Nepal 1974 to 2021*

Model	Long run estimates
3.1.1	$\ln Y = 0.43^* - 0.002^{**} \Delta \ln P + 0.15^* G$
3.1.2	$\ln Y = 0.14^* - 0.013^{**} \Delta \ln P + 0.14^* GR$
3.1.3	$\ln Y = 0.056^* - 0.0139^{**} \Delta \ln P + 0.152^* GC$
3.1.4	$\ln Y = 0.17^* - 0.142^{**} \Delta \ln P + 0.20^* GR + 0.05^* GC$

As the long-run estimates have been calculated, the short run (ECM) coefficients have been estimated in the next stage. The estimated results of ECM allow measuring the speed of the adjustments required to adjust to long run values after a short term shock. The short run results are shown in Table 6:

Table 7

ARDL Model ECM Estimates: Nepal 1974 to 2021

Model	Dependent Variable lnY
3.1.1	$0.87 - 0.023\Delta\ln P + 0.22\Delta\ln G - 0.21ECM (-1)$
3.1.2	$0.109 - 0.015\Delta\ln P + 0.172\Delta\ln GR - 0.009 ECM (-1)$
3.1.3	$0.120 - 0.023\Delta\ln P + 0.022\Delta\ln GC - 0.05 ECM (-1)$
3.1.4	$0.146 - 0.022\Delta\ln P + 0.023\Delta\ln GR + 0.035\ln GC - 0.04 ECM(-1)$

The coefficient of error correction term (ECM) is -0.21, -0.009, -0.05 and -0.035; with the expected sign and significant p-value. However the ECM coefficient is

fairly lasmall and which implies that small percentage of the disequilibria in the in GDP of the previous year’s shocks adjust back to the long run equilibrium in the current year.

Table 8

Cointegration Test Statistic for lnY: Nepal 1974- 2021

Model	Eigen Value	Hypothesized no. of CE	r trace
M-1	0.636061	None * r=0	53.16381*
	0.172158	At most 1 r≤1	8.690016
	0.008531	At most 2 r≤ 2	0.376986
M-2	0.536715	None * r=0	45.70959*
	0.235442	At most 1 r≤1	11.85538
	0.00983	At most 2 r≤ 2	0.043279
M-3	0.616071	None * r=0	54.82586*
	0.248276	At most 1 r≤1	12.70477
	0.003353	At most 2 r≤ 2	0.147771
M-4	0.626388	None * r=0	68.65064*
	0.256431	At most 1 r≤1	25.33101
	0.242778	At most 2 r≤ 2	12.29411
	0.001312	At most 3 r≤ 3	0.057752

*denotes rejection of hypothesis at the 5% significance level. MacKinnon-Haug-Michelis, 1999 p-values.

Table 8 reported that long run equilibrium exists between the variables (lnY, lnP, lnG, lnGR, & lnGC). Thus, it will be concluded that there is long relationship between the GDP, rate of inflation and government expenditure exist in terms of Nepal. The trace statistics indicates that there are two numbers of cointegration equations at the

5% level which confirm the results of the Pesaran et al. (2001) cointegration approach

The Granger Causality test has been used to verify the direction of causality between the variables of Nepal. It measures the two ways causality means the cause and effect relationship between two or more variables. The results are shown in Table 9:

Table 9*Granger Causality Results F-statistics: Nepal 1974 -2021*

Variables	F- Statistics	P- value
lnP lnY	3.88300	0.0288*
lnY lnP	1.42369	0.2528
lnG lnY	6.11911	0.0048*
lnY lnG	0.70560	0.4999
lnG lnP	4.56029	0.0164*
lnP lnG	0.08721	0.9167
lnGR lnY	5.68309	0.0067*
lnY lnGR	4.35030	0.0195*
lnGR lnP	1.52312	0.2304
lnP lnGR	3.85789	0.0294*
lnGC lnY	4.54984	0.0166*
lnY lnGC	2.35327	0.1081
lnGC lnP	3.31303	0.0466*
lnP lnGC	2.33421	0.1099
lnGR lnGC	3.03897	0.0591
lnGC lnGR	4.17867	0.0225*

*indicates the rejection of null hypothesis at 5% significant level.

The test results show that there is unidirectional causality between rate of inflation and GDP; total government expenditure and GDP; total government expenditure and rate of inflation; rate of inflation and government recurrent expenditure; government capital expenditure and GDP; government capital expenditure and rate of inflation and government capital expenditure and government recurrent expenditure. The test result also indicated that there is bidirectional causality between government recurrent expenditure and GDP.

The test results also show that there is no directional causality between rate of

inflation and government expenditure. In case of GDP and government capital expenditure, there is also no causal relationship.

Finally, the model has passed through the stability test. The cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMSQ) are used as the last stage of ARDL estimation to check that all coefficients in ECM model are stable or not. The plots of CUSUM and CUSUMSQ statistics are presented in Fig 1:

Fig. 1

Plot of CUSUM and CUSUMQ

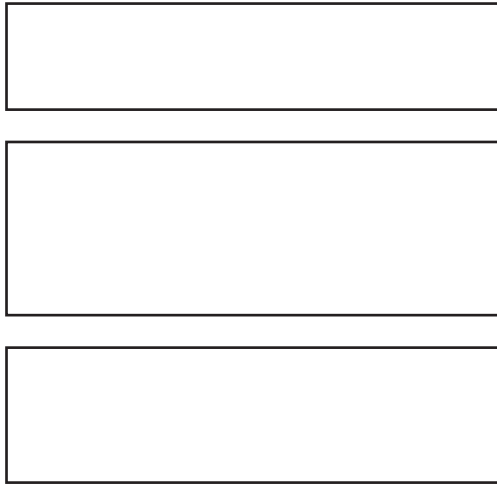


Fig 1 indicates the plot of cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMSQ) that all the coefficients in the estimated ECM model are stable over the sample period at the 5% level of significant. And all the models can be evaluated for an effective policy analysis by the policy makers.

Conclusion

The relationship between inflation and economic growth has been the subject of extensive research over the past of few decades. This research is going to explore the same relationship between inflation, economic growth, and government expenditure, in case of Nepal. At the first step, unit root was tested and the test results indicate that the time series data is stationary. Secondly, ARDL has been used to measure the long run and short run estimates. The findings disagree with the new classical proposition (Ricardian equivalence). The negative high coefficient

of inflation had been found in the case of Nepal. It states that if the rate of inflation exceeds the threshold level the growth nexus is strongly (negatively) affected by the inflation. The estimated relationship between real income and government expenditure is positive.

As the government expenditure is disaggregated into government current expenditure and government development expenditure, the coefficient of government current expenditure is statistically insignificant. However, the coefficient of government development expenditure is statistically significant, which shows that the government expenditures yield positive externalities and linkages. The model has passed through the stability test. The cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squares of recursive residuals (CUSUMSQ) are used as the last stage of ARDL estimation to check that all coefficients in the ECM model are stable and applicable for effective policy analysis.

Recommendations

First, the negatively high coefficient of inflation has suggested the policy makers to reconsider about the existing macro-economic policy. The first priority of them are to control the inflation by introducing “Inflation First” policy because high and persistent inflation is consider as imposition of regressive tax on the poor people and adversely impact on the economic development. Secondly, In case of the developing countries, a lot of issue faced by the government, like: utilization and the miss-allocation of resources. If

the government expenditures are utilized in the excess amount, the excessive capital (productive) expenditures become unproductive at the margin.

References

- Adhikari (2014). Whether inflation hampers economic growth in Nepal? *IOSR Journal of Economics and Finance*, Volume 5 Issue 6
- Ahmed, S., & Mortaza, M. G. (2010). Inflation and economic growth in Bangladesh: 1981-2005 (No. id: 3033).
- Aghevli, B. B., & Khan, M. S. (1978). Government deficits and the inflationary process in developing countries. *Staff Papers*, 25(3), 383-416.
- Barro, Robert J. Inflation and economic growth. No. w5326. National bureau of economic research, 1995.
- Bhatta, S. R. 2015. Optimal rate of inflation for Nepal: An empirical investigation. *2nd International Conference on Economics and Finance. Kathmandu.*
- Bhushal, T. P., and S. Silpakar. 2011. Growth and Inflation: Estimation of Threshold Point for Nepal. *Economic Journal of Development Issues*, 13 and 14(1-2).
- Burdekin, R. C., Denzau, A. T., Keil, M. W., Sitthiyot, T., & Willett, T. D. (2004). When does inflation hurt economic growth? Different nonlinearities for different economies. *Journal of Macroeconomics*, 26(3), 519-532.
- Burdekin, R. C., Goodwin, T., Salamun, S., & Willett, T. D. (1994). The effects of inflation on economic growth in industrial and developing countries: is there a difference? *Applied Economics Letters*, 1(10), 175-177.
- Dorrance, GS (1963). The effect of inflation on economic development. *Staff Papers*, 10 (1), 1-47.
- Fischer, S. (1993). The role of macroeconomic factors in growth. *Journal of Monetary Economics*, 32(3), 485-512.
- Ginting, E. (2007). Is inflation in India an attractor of inflation in Nepal? IMF Working Paper.
- Gregorio, Jose de. (1996). Inflation, Growth, and Central Banks: Theory and Evidence. *World Bank Policy Research Working Paper 1575, Policy Research Department, Macroeconomics and Growth Division (February 1996).*
- Malla, S. (1997). Inflation and economic growth: Evidence from a growth equation. *Department of Economics, University of Hawai'i™ I at Monoa, Honolulu, USA.*
- Mallik, G., & Chowdhury, A. (2001). Inflation and economic growth: evidence from four South Asian countries. *Asia-Pacific Development Journal*, 8(1), 123-135.
- Mundell, R. (1965). Growth, Stability and inflationary finance. *Journal of Political Economy*, 73 (2), 97-109.

Bank, N. R. (2017) Optimal Inflation Rate for Nepal. *Economic Review, Vol 29, Nepal Rastra Bank, Baluwatar, Kathmandu, Nepal*

Pollin, R., & Zhu, A. (2006). Inflation and economic growth: A cross-country nonlinear analysis. *Journal of Post-Keynesian Economics, 28(4), 593-614.*

Sarel, M. (1996). Nonlinear effects of inflation on economic growth. *Staff Papers, 43(1), 199-215.*

Tobin, J. (1965). Money and economic growth. *Econometrica, 33, 671-684.*

Wai, U. T. (1959). The relation between inflation and economic development: a statistical inductive study. *Staff Papers (International Monetary Fund), 7(2), 302-317.*

Wallich, H. C. (1969). Money and growth: A country cross-section analysis. *Journal of Money, Credit and Banking, 1(2), 281-302.*