Testing the Intensity of Macroeconomic Indicators and Institutional Quality on Deposit of Banks and Financial Institutions of Nepal

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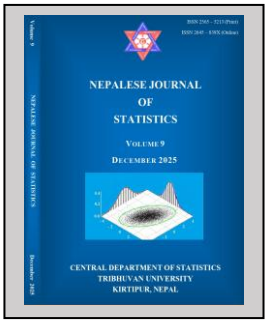

ABSTRACT

Background: Nepal's banking sector is currently experiencing an imbalance characterized by high deposit but low demand of credit reflected by contraction of aggregate demand. Issues related to institutional governance are no less. The volume, growth, and stability of these deposits are not only determined by the operational strategies of banks but are also influenced by a range of macroeconomic indicators and institutional quality.

Objective: This situation prompted a study to examine the relationship between macroeconomic indicators, institutional quality and deposit of banks and financial institutions of Nepal.

Materials and Methods: Analyzing 48 years of data from 1975 to 2023 sourced from various economic surveys, annual reports of Nepal Rastra Bank. At first, study used ARDL technique to explore the relationship of macroeconomic indicators with deposit of banks and financial institutions and then the relationship is explored with remittance and institutional factors. Robustness of these results are tested employing Granger Causality.

Results: GDP revealed positive significant (0.195) effect on deposit growth. In the long run, lagged effect of money supply reduced (-0.604) deposit but it increased (1.189) deposit if lag is not considered. Effect of money supply in the short run was positively significant (1.189). Exchange rate depreciation was significant and contributed positively (0.046). Summation of recurrent and financial expenditure also indicated positive significant effects (0.029) on deposits. Capital expenditure exhibited positive significant effect in both long run and short run (0.004). Remittance demonstrated strong positive significant relation (0.247) and most of the institutional factors like political stability (0.005), rule of law (0.001), regulatory quality (0.006) and voice and accountability (0.002) contributed positively in deposit mobilization while government effectiveness contracted (-0.007) deposit, potentially representing structural inefficiencies in bank based financial system.

Conclusion: This paper concludes that effective management of money supply, exchange rate stability together with fiscal discipline and enhancing the effectiveness of capital expenditure from the side of fiscal policy are crucial for promoting deposit mobilization. Furthermore harnessing the remittance into productive sectors, strengthening institutional qualities like rule of law and

regulatory quality, political stability and government effectiveness are essential for ensuring efficient deposit mobilization and diversification.

Keywords: Deposit, institutional quality, macroeconomic indicators.

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INTRODUCTION

A robust and stable financial system is crucial for smooth transfer of funds from surplus units to deficit units of the economy. Throughout this process, financial resources effectively flow from savers to borrowers. These transfers promote economic growth and development. A stable financial system serves as a bridge by connecting depositors and investors for mobilising idle funds (Hasan, 2024). These funds, channeled through various financial instruments, are then allocated to productive sectors of the economy, such as manufacturing, agriculture, and services. When funds and capital flow into productive sectors of the economy, it encourages investment, innovation, and entrepreneurship. These development work together to strengthen economic growth and expand employment opportunities (Fatai & Alenoghena, 2024). Collecting deposits and it's effective mobilization is one of the major function of a bank. It is a continuos effort that requires careful strategy and proper execution. Banks collect deposits through attractive deposit products. They deliver excellent customer service, and ensure the deposit of customers are safe and secure. Banks also encourage individuals and businesses to place their savings with them. Strong base of deposit creates strong financial system and ensures the financial stability (Uremadu & Obim, 2024). Deposit growth is not just affected by internal factors of bank. External economic conditions like inflation, population increase, and political stability also play a major role in shaping the growth of deposits (Banke & Yitayaw, 2022). In addition to these factors, deposits held by banks and financial institution also depends on factors such as Gross Domestic Product and exchange rate, money supply (Femi, 2021) and government expenditure (Azolibe, 2019). The growth rate of a country's GDP can affect the performance of banks and financial institution as it is linked to macroeconomic factors such as inflation and foreign exchange rates (Alex, 2023).

GDP influences both public and private banks. Rise in GDP generally leads to increase in deposits and lending activity which supports financial stability and growth (Kasana et al., 2024). As the economy improves, incomes and savings of the people are also increased. Inflation indicated by the yearly change in price of consumer goods, is linked to the money supply (Stylianou et al., 2024). Government and central bank often limit the money supply to control inflation. This condition causes banks to compete by offering higher interest rates to attract deposits. Fiscal and monetary policies affect the supply of domestic currency, while market expectations, inflations and interest

rates affect (Berger & Bouwman, 2013). When countries trade globally, fluctuations in exchange rates significantly affect profitability of commercial banks by influencing cross-border transactions, currency conversions, and management of foreign currency deposits and loans (Chiira, 2009). The notable monetarist Friedman (1968) emphasizes the crucial role of monetary policy in influencing credit by affecting interest rates. An expansionary policy monetary policy is supposed to boost bank deposits and lending capacity, while a contractionary policy limits deposits and credit availability.

In addition to macroeconomic factors, institutional qualities like political stability (Banke & Yitayaw, 2022), rule of law and regulatory quality (Nguyen, 2022) encourage investment and promote economic growth. Resulting in the increase in profitability of banks and financial institutions. Prudential regulation for deposit taking financial intermediaries are essentially considered to support saving mobilization (Vo, 2024). Well-designed regulatory systems that operate within robust institutional environment support the development of stronger and competitive banking industry (Chand et al., 2024). Despite extensive research on macroeconomic factors and deposits, there is still limited amount of research on the joint effects of specific indicators like GDP, money supply, CPI, exchange rate and government expenditure on deposit. Subject matter of prior studies (Lamichhane, 2020; Pathak, 2022) have focused on deposit collection. Study conducted by (Pun, 2021) focused only on monetary factors like interest rate, money supply, cpi and remittance, overlooking the fiscal variables like government expenditure. Empirical studies on how institutional quality affect deposit of banks and financial institutions remains absent in the context of Nepal.

Financial system of Nepal is at a developing stage. Deposits of banks and financial institutions are influenced not only by internal strategies of banks but also by macroeconomic factors like GDP growth, inflation, exchange rate, government expenditure. Despite an increase in money supply, credit growth remains sluggish, while deposits continue to rise. This situation indicates that economy in recent time is shifting towards saving. This study contributes to the existing literature by exploring how key economic indicators affect volume of the deposit and financial stability in Nepal. This paper fills the existing research gap by disaggregating the recurrent, financial expenditure and capital expenditure as well as an institutional factors to analyze their effects on deposit of banks and financial institutions.

Literature review

Following the Keynesian perspective, Eichengreen (2020) emphasized that effective deposit policies are crucial for sustaining income growth. He argued that unproductive investment of savings can limit overall income and in the long run slow economic development. Analyzing the data from 14 Ethiopian commercial banks, Banke and Yitayaw (2022) found that loan-to-deposit ratio, capital adequacy, economic growth, inflation, population growth, and political stability negatively affect deposit mobilization, while bank profitability has a positive impact. Similarly, studied by Nasrin (2023) examined deposit mobilization in Bangladeshi commercial banks using insights from 200 professionals across 29 private banks. The study revealed that government monetary

policy, bank size, service diversification, and the local and national economic conditions are key determinants of deposit collection.

Berhe (2024) investigated the role of political stability along with bank-specific, industry-specific, and macroeconomic factors in determining the profitability of Ethiopian commercial banks during the period of 2012–2022. Using a two-step system GMM estimator on data from 17 banks, the study found that political instability significantly reduces profitability, offering important implication for policymakers and bank managers. Duong et al. (2024) examined the impact of digital transformation on bank performance in Vietnam by using mixed methods and data from 400 bank employees. Their findings identified deposit mobilization, profitability, and customer loyalty as key performance drivers, with savings interest rates, technology, and inflation influencing these factors. Strength of institutions particularly the rule of law, plays a crucial role in development of financial system (Beck et al., 2005). The development of financial markets, especially with credit growth of credit depends heavily on a strong and effective legal framework supported by efficient law enforcement and well protected property rights (Bishwakarma et al., 2024). In the context of Nepal, Lamichhane (2020) examined factors shaping depositors' perceptions of commercial bank performance based on a survey conducted in the Kathmandu valley in 2019. The result of this study revealed that depositors in value accessibility and bank image but express dissatisfaction with low interest rates and limited e-banking services. Technology, interest rates, and managerial efficiency were identified as key determinants influencing deposit behavior and bank performance. Similarly, Bista and Basnet (2022) analyzed time deposit determinants in Nepal over the period 2000–2018. Their findings showed that internal factors such as GDP per capita, interest rates, bank size, and branch network exerted a stronger influence on deposit mobilization than external factors. The authors emphasized the importance of aligning banking strategies with monetary policy to enhance deposit mobilization and ensure financial stability.

MATERIALS AND METHODS

Data

This study uses secondary data from various surveys to analyze the nexus between macroeconomic indicators and deposits of banks and financial institutions of Nepal over the period from 1975 to 2022. Data on macroeconomic indicators and deposits such as real GDP, money supply, consumer price index, government expenditure, exchange rate and remittance were sourced from the Economic Survey and annual reports published by Nepal Rastra Bank (NRB). Data on institutional quality were obtained from World Governance Indicators (WGI). Trend visualization of selected data is presented in Appendix A and B. As Nepal is a developing economy, most macroeconomic factors exhibit an increasing trend over the study period. However, the share of capital expenditure on total expenditure shows a declining trend over time. Institutional factors including regulatory quality and rule of law display considerable fluctuation reflecting persistent policy instability in Nepal. Government effectiveness shows an overall declining trend with intermittent fluctuations. Control of corruption declined from 2000 but began to improve from 2016. Both political stability and absence of violence as well as voice and accountability exhibit

increasing trends with notable fluctuations. Overall, the institutional environment of Nepal has remained unstable over time.

Methodology

All the continuous variables (RGDP, MS, EX, RFE, REM, CAPEX) variables were transformed into their natural logarithm to stabilize variance, improve normality and allow the coefficients to be interpreted as elasticities. This study employs Autoregressive Distributed Lag (ARDL) model after confirming that the variables are stationary at first difference. Proposed ARDL model on the basis of (Pesaran et al., 2001) is presented in the following equation.

$$\Delta LTD_t = \alpha_0 + \lambda_1 LTD_{t-1} + \lambda_2 LRGDP_{t-1} + \lambda_3 LMS_{t-1} + \lambda_4 LCPI_{t-1} + \lambda_5 LEX_{t-1} + \lambda_6 LRFE_{t-1} + \beta_1 \sum_{i=1}^{n} \Delta LTD_{t-i} + \beta_2 \sum_{i=1}^{n} LRGDP_{t-i} + \beta_3 \sum_{i=1}^{n} LMS_{t-i} + \beta_4 \sum_{i=1}^{n} LCPI_{t-i} + \beta_5 \sum_{i=1}^{n} LEX_{t-i} + \beta_6 \sum_{i=1}^{n} LRFE_{t-i} + \varepsilon_t \quad (1)$$

Adding the long term link between the series on (1) short-term coefficients can be calculated as specified in (2).

$$\Delta LTD_t = \alpha_0 + \lambda_1 LTD_{t-1} + \lambda_2 LRGDP_{t-1} + \lambda_3 LMS_{t-1} + \lambda_4 LCPI_{t-1} + \lambda_5 LEX_{t-1} + \lambda_6 LRFE_{t-1} + \beta_1 \sum_{i=1}^{n} \Delta LTD_{t-i} + \beta_2 \sum_{i=1}^{n} LRGDP_{t-i} + \beta_3 \sum_{i=1}^{n} LMS_{t-i} + \beta_4 \sum_{i=1}^{n} LCPI_{t-i} + \beta_5 \sum_{i=1}^{n} LEX_{t-i} + \beta_6 \sum_{i=1}^{n} LRFE_{t-i} + \gamma ECM_{t-1} + \varepsilon_t \quad (1a)$$

Similarly (3) and (4) represents the second model where variables related to institutional quality are included.

$$\Delta LTD_t = \alpha_0 + \lambda_1 LTD_{t-1} + \lambda_2 LREM_{t-1} + \lambda_3 LCAPEX_{t-1} + \lambda_4 LRQ_{t-1} + \lambda_5 LRL_{t-1} + \lambda_6 LGE_{t-1} + \lambda_7 LCCR_{t-1} + \lambda_8 LPSV_{t-1} + \lambda_9 LVAC_{t-1} + \beta_1 \sum_{i=1}^{n} \Delta LTD_{t-i} + \beta_2 \sum_{i=1}^{n} LREM_{t-j} + \beta_3 \sum_{i=1}^{n} LCAPEX_{t-i} + \beta_4 \sum_{i=1}^{n} LRQ_{t-i} + \beta_5 \sum_{i=1}^{n} LRL_{t-i} + \beta_6 \sum_{i=1}^{n} LGE_{t-i} + \beta_7 \sum_{i=1}^{n} LCCR_{t-i} + \beta_8 \sum_{i=1}^{n} PSV_{t-i} + \beta_9 \sum_{i=1}^{n} LVAC_{t-i} + \varepsilon_t \quad (2)$$

$$\Delta LTD_t = \alpha_0 + \lambda_1 LTD_{t-1} + \lambda_2 LREM_{t-1} + \lambda_3 LCAPEX_{t-1} + \lambda_4 LRQ_{t-1} + \lambda_5 LRL_{t-1} + \lambda_6 LGE_{t-1} + \lambda_7 LCCR_{t-1} + \lambda_8 LPSV_{t-1} + \lambda_9 LVAC_{t-1} + \beta_1 \sum_{i=1}^{n} \Delta LTD_{t-i} + \beta_2 \sum_{i=1}^{n} LREM_{t-i} + \beta_3 \sum_{i=1}^{n} LCAPEX_{t-i} + \beta_4 \sum_{i=1}^{n} LRQ_{t-i} + \beta_5 \sum_{i=1}^{n} LRL_{t-i} + \beta_6 \sum_{i=1}^{n} LGE_{t-i} + \beta_7 \sum_{i=1}^{n} LCCR_{t-i} + \beta_8 \sum_{i=1}^{n} LPSV_{t-i} + \beta_9 \sum_{i=1}^{n} LVAC_{t-i} + \gamma ECM_{t-1} + \varepsilon_t \quad (2a)$$

where, LTD represents logarithm form of total deposits of banks and financial institutions; LRGDP represents logarithm form of real gross domestic product; LMS represents logarithm form of broad

money supply; LCPI represents consumer price index; LEX represents logarithm form of exchange rate; LRFE represents logarithm form of recurrent and financial expenditure; LREM represents logarithm form of remittance; LCAPEX represents logarithm for of capital expenditure; LRQ represents regulatory quality; LRL represents rule of law; LGE represents government effectiveness; LCCR represents control of corruption; LPSV represents political stability and violence; LVAC represents voice and accountability; ECM represents lag order of dependent and independent parameters, α represents intercept, λ represents long run coefficients, β represents short run coefficients and ε represents error term in the model. The second model is estimated separately from first model because the dataset of remittance and institutional quality are unavailable before 2000. For conducting scientific study selection of variables must be grounded in established theory or supported by prior empirical literatures. Accordingly, the macroeconomic and institutional factors for this study were selected on the basis of prior research of (Banke & Yitayaw, 2022; Sanga & Aziakpono, 2022).

Justification for methodology

(Nkoro & Uko, 2016) recommend the use of ARDL approach when dealing with the variables that are integrated of order zero, I(0), order one, I(1), or a combination of both. Moreover, the ARDL model captures both long run and short run dynamics making it particularly suitable for analyzing dynamic relationships in studies with relatively small sample size.

RESULTS AND DISCUSSION

Table 1 presents the results of unit root test conducted to examine the stationarity of the variables using Augmented Dickey Fuller (ADF) test. Since the variables exhibit trending behavior, the unit root test was performed by including both trend and an intercept. The test statistics after first difference are significant, indicating that all variables become stationary after first differencing. Thus, all variables are integrated of order one, I(1).

After completing the stationary tests, the ARDL bounds cointegration bound test was conducting to confirm the existence of long run relationship between the variables. The results reported in table 2 indicate the presence of cointegration, as the computed F-statistic exceeds critical upper critical bounds on 10%, 5% and 1%. Lag length was selected following (Wooldridge, 2016) who notes that when analysing annual data, the appropriate number of lags is typically small usually 1 or 2 lags in order to avoid losing degrees of freedom. For quarterly data one to eight lags are generally appropriate, while for monthly data six, twelve or twenty four may be used provided sufficient observation available. Since, this study employs annual data, a lag length of one was selected.

Table 1. ADF tests of the variables.

Variables in log form	Model 1		Model 2		Order of integration
	Level	First Difference	Level	First Difference	
ltd	-2.133	-5.411***	-	-	I(1)
lrgdp	-3.377	-7.798***	-	-	I(1)
lms	-2.129	-4.774***	-	-	I(1)
lcpi	2.710	-3.486***	-	-	I(1)
lex	-0.672	-5.251***	-	-	I(1)
lrfe	-2.329	-6.491***	-	-	I(1)
lrem	-	-	-1.054	-4.306***	I(1)
lcapex	-	-	-1.985	-3.569**	I(1)
lrq	-	-	-2.284	-5.062***	I(1)
lrl	-	-	-3.143	-3.914**	I(1)
lge	-	-	-2.847	-5.487***	I(1)
lccr	-	-	-3.144	-6.443***	I(1)
lpsv	-	-	-2.801	-5.711***	I(1)
lvac	-	-	-6.693***	-6.619***	I(0)

***p < 0.01, **p < 0.05

Table 2. Bound test.

Model	F-statistic
Model 1	12.192***
Model 2	66.303***

***p < 0.01

The ARDL long-run coefficients reported in table 3 provide important insights into the long-term relationship between the dependent variable and the selected independent variables. The coefficient indicates that a 1 percentage increase in real GDP is linked to a (0.195) percent increase in deposits in the long run, assuming all other factors remaining same. This suggest that, economic growth may lead to higher deposits which is consistent with findings of (Boadi et al., 2015). A 1% increase in money supply leads (0.604) percent to decrease in deposits when lagged effect is considered whereas deposits increase by (1.189) percent in the long run without the lag, with both the relationship being highly significant (p-value = 0.00). This finding align with Keynesian monetary theory which argues that an increase in money supply raises liquidity in the economy and lowers interest rates (assuming constant money demand). Lower interest rates encourage individuals and businesses to hold money in the form of liquid, such as bank deposits, rather than investing in less liquid assets. This result is also supported by (Yakubu & Abokor, 2020), highlighting the critical role

of monetary policy and liquidity management in influencing deposit growth. According to liquidity preference theory, individuals prefer to hold their wealth in liquid forms (cash or bank deposits) for transactions, precautionary, and speculative motives. When money supply increases, individuals and businesses often find themselves with excess liquidity, which is frequently stored as deposits in banks. These findings are consistent with (AlHarbi et al., 2024) who also observed that broad money significantly explains banking loans an deposits. The coefficient of consumer price index used as a proxy of inflation indicates that a 1% increase in the consumer price index is associated with a small (0.0001) percent decrease in deposits in the long run. However, this relationship is statistically insignificant. Although higher inflation generally reduces the value of money, this result may suggest that people are increasingly saving in banks and financial institutions to protect their wealth from inflation. This finding align with (Ludeen & Masih, 2017), who also reported that the inflation rate does not have significant impact on deposits.

Table 3. Long run relationship.

Covariates	Model 1	Model 2	Covariates	Model 1	Model 2
ldp(-1)	0.373*** (0.104)	0.559*** (0.090)	Lrq	-	0.006 (0.004)
Lrgdp	0.195** (0.103)	-	lrl	-	0.001 (0.002)
Lms	1.189*** (0.058)	-	lge	-	-0.007** (0.027)
lms (-1)	-0.604*** (0.121)	-	lge(-1)	-	-0.009** (0.004)
Lcpi	-0.0001 (0.0002)	-	lccr	-	-0.0001 (0.0024)
Lex	0.046*** (0.017)	-	lpsv	-	0.005** (0.002)
Lrf	0.0291*** (0.0336)	-	lvac	-	0.002 (0.003)
Lrem	-	0.247*** (0.086)	lvac(-1)	-	0.012*** (0.003)
Lcapex	-	0.004* (0.002)	N	45	24
lcapex(-1)	-	-0.008*** (0.007)	R^2	0.99	0.99

Standard error in parenthesis, ***p < 0.01, **p < 0.05

The positive and significant coefficient of exchange rate indicates that a 1 percent depreciation in the exchange rate (decrease in value of local currency against foreign currencies) is associated with (0.046) percent expansion in deposits in the long run. This finding is consistent with (Sahminan, 2007) who argued that when amount of foreign currency assets exceeds foreign currency liabilities, exchange rate depreciation reduces probability of bank failure. Similarly, (Tun, 2019) also found that the exchange rate has a positive and significant effect on deposits in private banks. In line with (Alemu, 2021) government recurrent and financial expenditure positively and significantly affects deposit. Specifically, a 1 percent increase in government expenditure is associated with a (0.029) percentage increase in deposits in the long run and a 1 percentage increase in capital expenditure leads to (0.004) percentage increase in deposits in both the long run and short run. Remittance is another strong factor causing rise in the deposit. A 1 percent increase in remittance leads to increase in deposit by (0.247) percent. This is similar to the previous research conducted by (Demirgüç-Kunt et al., 2011). Most of the institutional factors are found to be positively contributing in the growth of deposit. Institutional quality like regulatory quality and rule of law are found to be positively contributing with 1 percent increase in both factors causing growth in deposit by (0.006) and (0.001) percent, respectively. These values are not significant, suggesting the weak effect of regulatory quality and rule of law towards deposits. Nevertheless, strengthening regulatory quality and rule of law may enhance their positive contribution in the long run. Deposits also increase when political situation of Nepal becomes more stable and voice and accountability improves. As the coefficient is positively and statistically significant in both the cases. A 1 percent increase in both the institutional factors leads to rise in deposit by (0.005) and (0.002) percent respectively. These findings regarding institutional quality are consistent with prior studies (Banke & Yitayaw, 2022; Nguyen, 2022; Sanga & Aziakpono, 2022).

In contrast, government effectiveness was found statistically significant with negative effect on deposits in both short run and long run reducing deposit by (0.007) percent. This negative coefficient likely represents structural inefficiencies in financial intermediation rather than adverse role of government itself. As institutional quality improves trust in broader financial system, savers in transforming economies like Nepal gain access to alternative formal financial instruments which are beyond bank deposits. This reallocation of savings reflects a portfolio diversification effect and supports deeper financial inclusion. Overall, this suggests that improvements in institutional quality foster deeper and more comprehensive financial inclusion (Bishwakarma et al., 2024).

In the short-run analysis based on the coefficients in table 4 indicate money supply (LMS) has a significant positive impact on deposits. Specifically, a 1 percentage increase in the money supply leads to (1.189) percentage increase in deposits in the short run. This suggest that an expansionary monetary policy can boost deposit by enhancing consumer confidence and may lower interest rates, thereby making saving more attractive. The coefficient of the Error Correction Term (-0.626) for model 1 and (-0.440) reflects how quickly the system returns to long-run equilibrium after a shock. A coefficient of (-0.626) means that about 62.60 percent of model 1 and (-0.440) of model 2 of the disequilibrium (the difference between short-run and long-run values) is corrected in each period.

Diagnostic tests are presented in table 5. The results confirm that the residual are normally distributed, free from heteroskedasticity and exhibit no serial correlation, as all p value exceeds

0.05. Robustness of ARDL results was verified using the Granger Causality test, reported in table 6 and 7 . The test indicates that most of the relationships identified by the model are robust and reliable.

Table 4. Short run coefficients.

Covariates	Model 1	Model 2
lms	1.189*** (0.016)	-
lcapex	-	0.004*** (0.001)
lge	-	-0.007*** (0.001)
lvac	-	0.002** (0.001)
CointEq (-1)	-0.626***	-0.440***
N	45	24
R^2	0.94	0.90

Standard error in parenthesis, ***p < 0.01, **p < 0.05

Table 5. Diagnostic tests.

Name of the Test	P-value for Model 1	Model 2
Jarque Bera Normality	0.849	0.880
Breusch Godfrey Serial Correlation	0.579	0.197
Harvey Test Heteroskedasticity	0.196	0.252

Table 6. Granger causality test for model 1.

Null Hypothesis	Observation	F-statistics	Probability
lrgdp does not granger cause ldp	45	5.597	0.022***
ldp does not granger cause lrgdp		12.021	0.001***
lms does not granger cause ldp	45	7.296	0.009***
ldp does not granger cause lms		2.041	0.160
lcpi does not granger cause ldp	45	1.602	0.212
ldp does not granger cause lcpi		2.100	0.154
lex does not granger cause ldp	45	1.266	0.266
ldp does not granger cause lex		0.324	0.571
lrfe does not granger cause ldp	45	0.008	0.992
ldp does not granger cause lrfe		6.365	0.015***

***p < 0.01, **p < 0.05

Table 7. Granger causality test for model 2.

Null Hypothesis	Observation	F-statistic	Probability
lrem does not granger cause ldp	23	7.334	0.013***
ldp does not granger cause lrem		0.080	0.779
lcapex does not granger cause ldp	23	0.275	0.605
ldp does not granger cause lcapex		2.840	0.107
lrq does not granger cause ldp	23	1.845	0.189
ldp does not granger cause lrq		1.442	0.243
lrl does not granger cause ldp	23	2.893	0.104
ldp does not granger cause lrl		1.387	0.252
lge does not granger cause ldp	23	0.757	0.394
ldp does not granger cause lge		0.372	0.548
lccr does not granger cause ldp	23	3.429	0.078*
ldp does not granger cause lccr		0.559	0.463
lpsv does not granger cause ldp	23	3.414	0.079*
ldp does not granger cause lpsv		12.912	0.463
lvac does not granger cause ldp	23	0.0105	0.919
ldp does not granger cause lvac		19.274	0.000***

***p < 0.01, **p < 0.05

According to the results of granger causality test of model 1 and model 2 in table 6 and table 7. There is bidirectional causality between economic growth (GDP) and deposit, unidirectional causality between money supply, recurrent and financial expenditure and deposit. Remittance granger causes deposit and control of corruption, political stability and voice and accountability demonstrate unidirectionally causality with deposits. The results of granger causality test depicts concerning picture of Nepalese economy. Money supply and remittance inflows Granger cause deposit of banks and financial institutions, while deposit in turn Granger cause recurrent and financial expenditures. This suggests that fiscal spending in Nepal is largely driven by deposit mobilization, which itself depends heavy on monetary expansion and remittance inflow rather than productive domestic economic activities. Government effectiveness is found to be statistically significant and negative in the ARDL model. However, it doesn't exhibit Granger causality with deposits. This indicates that causal impact of government effectiveness to deposit is weak, even though it influences level of deposits. Since, government effectiveness positively contributes to financial deepening, as noted by (Sanga & Aziakpono, 2022) and as financial market develops time deposits tend to decrease reflecting a partial shift from long term deposit to market based financing (Srivastava et al., 2025).

In Nepal, financial markets remain underdeveloped. Banks and financial institutions dominate the financial system which collectively control about 80 percent of the total assets of the financial system (International Monetary Fund, 2023). Consequently, banks are increasingly seeking

opportunities in a new geographic areas to diversify their risk customer base and reduce risk (Paudel, 2020). These observations underscore the need to enhance institutional quality, particularly government effectiveness, to mobilize the growing deposits of banks and facilitate a gradual transition from bank based financing to market based financing. Cumulative sum (CUSUM) test is used to detect systematic shifts in regression coefficients, whereas the cumulative sum of squares (CUSUMSQ) test identifies abrupt departures from coefficient stability.

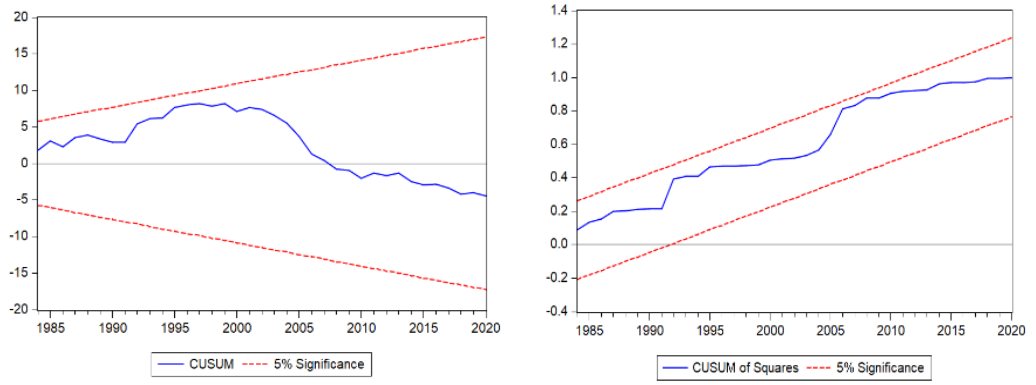

Fig. 1. CUSUM plots of model 1.

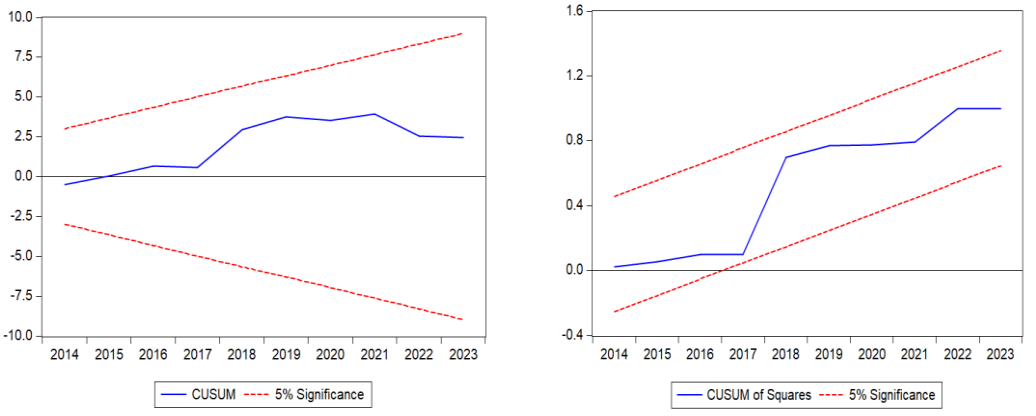

Fig. 2. CUSUM plots of model 2.

Figure 1 and 2 presents the results of both tests. The findings indicate no evidence of coefficient instability, as the CUSUM and CUSUMSQ statistics remain within the 5 per cent critical bounds throughout the sample period. This confirms the stability of the estimated coefficients over the study period.

CONCLUSION

This study demonstrates that macroeconomic indicators such as real GDP, money supply, CPI, exchange rate, and spending of the government plays a significant role in shaping the saving and deposit behavior of the people. The growth in deposits despite the Nepal Rastra Bank's cautious monetary stance, including liquidity absorption and policy rate reductions, can be attributed to several key factors. Economic growth, represented by real GDP shows a significant relationship with deposit growth, suggesting that income growth directly translate into higher household savings. Similarly, money supply has a strong positive effect on deposits which is consistent with theories that suggest higher liquidity encourages individuals and businesses to save more in banks. Inflation, measured by the consumer price index shows statistically insignificant results.

From the positive aspect, regulatory stability and trust in Banks have also caused rise in the amount of deposits. The measures of Nepal Rastra Bank like introduction of the standing deposit facility and maintaining the interbank rate near the lower bound of the policy corridor, signaled stability and reliability in the banking sector. This likely reinforced public confidence in banks, encouraging higher deposits. From the negative side, there is excess deposit in banks and financial institutions but opportunities for qualitative investment are low. Daily accumulation of deposit has caused the problem of excess deposit. Deposits are rising faster compared to rise in credit flow and there is imbalance between risk and return. Government expenditure also has a positive significant effect, signaling that when government increases recurrent and financial expenditure it tends to increase the amount of deposits. Higher recurrent expenditure such as salaries and wages boosts household incomes, thereby, increasing deposits. Capital expenditure on project and infrastructure development create employment opportunities, which in turn increases income and savings of the people. The findings underscore the importance of effective fiscal management, particularly through well targeted capital expenditure. Strengthening institutional quality, including rule of law and regulatory effectiveness, is recommended to facilitate proper deposit mobilization and ensuring the excess liquidity is channeled efficiently into credit and investment. Stable institutions and stable policies are crucial for creating favorable investment environment, diversifying investment opportunities and risk management strategies. Moreover, channeling the remittance into more productive sector rather than consumption can promote capital formulation and support sustainable economic growth in the long run.

Limitation and future research opportunities

This study emphasized on the macroeconomic indicators, government expenditure combining both recurrent and financial expenditure and considering the rising non-performing loans. So, future study should assess the relationship by disaggregating the recurrent and financial expenditure and consider non performing loan. In addition, the relationship of these variables with financial development could also be explored by employing different methods like VAR, VECM and DSGE.

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CONFLICT OF INTEREST

The authors declare that they have no conflict of interest.

AUTHOR CONTRIBUTION

Smeeth Bista contributed to the methodology, data analysis, and writing, review and editing of the manuscript. Sagar Bishwakarma contributed to data analysis, literature review, and proofreading of the manuscript. All authors reviewed and approved the final version of manuscript.

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DATA AVAILABILITY

Data is available in the various economic surveys published by Ministry of Finance, annual report of Nepal Rastra Bank (NRB) and World Governance Indicators (WGI).

ETHICAL STATEMENT

Ethical clearance was not sought for the present study because of secondary data sources.

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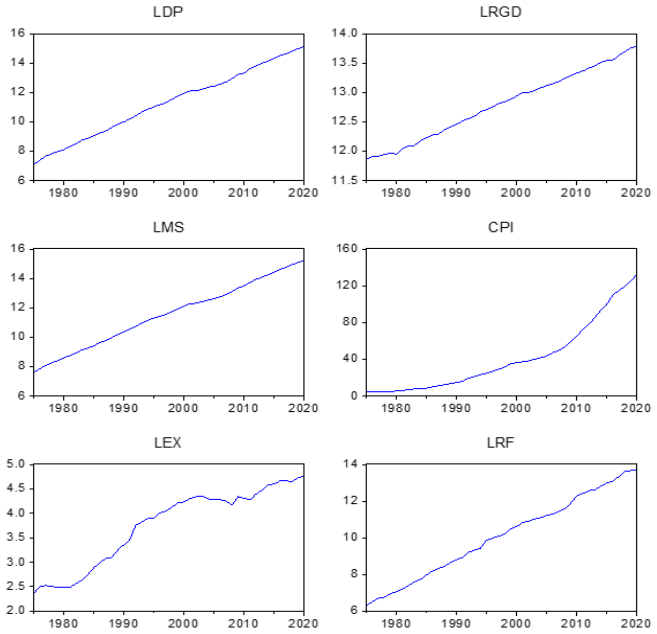
Annex A. Trend visualization of selected macroeconomic factors



Annex B. Trend visualization of institutional factors