

The Impact of Macro-Economic and Financial Variables on Commercial Bank Deposits in Nepal

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Abstract

The main objective of this study is to examine the potential impact of economic and financial variables on total deposit in Nepalese context by using quarterly time series data that spanned from 2009 Q4 to 2020 Q3. This study investigated using unit root (stationary) test, Johansen co-integration, and Granger causality test to analyze long-run association and causal relationship among variables under consideration. The study finds the empirical evidence of long-run integration and causality of economic and financial variables and bank deposits in Nepal. The result indicated bi-directional link between total deposit and inflation, inflation and money supply, and found uni-direction relation among some explanatory variables. Interestingly, the causation is found with a lag of 2 years. Hence, government should focus on such macro-economic and financial variables in order to maintain the economic and financial diplomacy of Nepal. This finding holds practical implication for policy maker, depositors, investors, and financial market analyst.

Keywords: *Total deposit, co-integration, granger causality, deposit interest rate, money supply, remittance, Nepal.*

I. Introduction

Financial institutions are known as organized corporate business houses that deals with financial and monetary transactions such as receives and holds deposits or funds, make loans or extends credits, make various investments, involves in currency exchange, and transfer funds by written orders of depositors and customers. Financial system of an economy is considered a major accelerator to the growth of financial and monetary development, growth and prosperity of industrial sectors and becoming the key driver of economic growth altogether. One of the most important functions of financial institutions, especially banks in Nepal is to regulate the demand and supply of credit by accepting the surplus funds from general public as deposit and supply the funds in the form of credit to the individual and business houses for the purpose of investment in different sectors legally recognized by the law. Hence, financial institutions gain economies of scale in analysis of potential customers either in analyzing the credit worthiness of potential borrowers, in processing and collecting loan, and minimizing costs of informations make easy flow of transactions making a safe investment resulting in successfully gaining the attention of depositors with different deposits products and schemes in order to increase their total deposits.

Financial institution's operations are regarded as a critical part of an economy, as individual and companies highly rely on financial institutions for transaction and investing purposes. When deposits decrease it leads bank credits to be expensive, the investment slowdowns and unemployment rises. Bank deposits represents the most significant components of the money supply used by the public; therefore, they plays an important role in nation's economic development as they are considered as capital providers for different sectors through

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various investment schemes. They render various services to their customers facilitating their economic and social life. Historically, bankruptcies in financial institutions can create panics and downturns of an economy. With the adoption of liberalization, privatization, and marketization policies by government of Nepal, Nepal is able to experience an Open economy which positively affected the Nepalese banking sector resulting in greater change in comparison to other sector. In spite of that, Nepalese banking sector is unable to provide international level banking services. In Nepal, an umbrella act (covering whole financial sector of Nepal) named Bank and Financial Institutions Act (BAFIA,2063) is enacted for regulating the bank and financial institutions. Similarly, Government of Nepal and Nepal Rastra Bank (NRB) begins an efficient program to increase the quality of banking sector.

It is expressed that most of the business enterprises are successfully operating their business through external source of capital other than owner's capital which indicates the importance of fund borrowing (Alam, 2008) also stated that entire banking system depends on borrowed fund from general public as deposit. According to Nepal Rastra Bank report (2020) reported that in the year 2019 deposits make up to 78.3% of total bank liabilities in Nepal. From this report we can understand the importance of deposit mobilization to the successful operation of banking system.

The recent and persistent increment in cost of living that ensued from major indicator like depreciation of currency, increase in fuel prices, high tariffs on imports, among others which make a direct association with increment in prices of goods and services leading to increased consumption overheads. This situation put less in saving without recommendable increment in incomes and profits. Therefore, this study is carried out to investigate the influence of financial and macro-economic variables on bank deposits which will bring some support to bank succeed in increasing customer deposit with the changing environment. This study particularly attempts to examine whether the customer deposit is influenced by the interest rates offered by the bank and how significantly macro-economic and financial market influence the customer deposits.

The rest of the paper is organized as follows: section 2 presents the review of the empirical literature. Similarly, section 3 presents methodology, model specification and estimation technique followed by section 4 which discusses empirical analysis of the study results. Finally, section 5 concludes the study and provide some recommendation.

II. Theoretical Framework

Bank and Financial institutions works as a bridge between saving surplus funds and serving funds deficit area by utilizing scatter funds to productive sectors. Hence, they plays a vital role in accelerating the growth of other industries/sectors through intermediate role of regulating the demand and supply of credits as well as transmission of government economic policies to the nation's economy. Macro-economic variables are those factors that affect the very large proportion of population representing the overall position of countries economic mutually at regional or national face. Many previous researches are based on saving behavior of individuals but rarely some researches are done on the deposit levels of bank (Haron and Azmi, 2006) and they stated that some studies on bank deposits and macro-economic variables are focused on comparison between conventional and Islamic banks. Akhtar et al. (2015) expressed that various studies are conducted and found strong association between deposits and economic growth. Other arguments reveals bank deposits form the basis of capital formation (Abduh et al. 2011); Adelakun, 2011)

Nicholas (2002) examined that remittance inflows are not dependent on financial sector's development of the country. It reveals that in order to gain in remittance efficiency usefulness,

remittance needs to be channelized properly then the deposits of the banks may increase which then can be used to overcome the problems of liquidity, resulting in increase in the level of investment leading to financial development.

Ozcan et al. (2003) examined and found significance positive effect of inflation, financial depth and measures, and income level on saving. Athukorala and Sen (2004) examined the determinants of private saving in India which reveals that real interest rate have significant positive but modest impact on saving. They also found inflation and rate of growth of disposable income have positive impact on the saving rate.

Fayissa et al. (2010) found that the remittances exert positive effect on economic growth in countries whose financial systems are less developed. The study shows common economic growth sources that provide an alternative way to finance investment and helping to overcome liquidity constraints. Knowledge and ability of spending on health, housing, nutrition, and other household items can increase their productivity and can play vital role in economic growth.

Chowdhury, M.B. (2011) investigated how remittance increase liquidity more as compared to loanable funds as remittances are mostly used for consumption purposes rather than productive proposes in the economy. As, these inflows are sources of foreign exchange which is very vital to the internal as well as the external sectors of the economy, therefore, they should be supported by formulating and implementing a suitable policy.

J.U.J Onwumere et al. (2012) examined the impact of interest rate liberalization on saving and investment and found deposit interest rate had negative non-significant impact on saving in Nigeria. This provides evidence that high interest rate due to liberalization may not help in deposit and investment of depositors in Nigeria. Tomola M. Obamuyi (2013) found that there is positive relation between deposit mobilization and bank lending. It also reveals thath majority of the bank income earned from advances and investment. So, bank should concentrate both deposit and lending for increment in profitability.

Shahzad et al (2014) found that there exist positive and significant impact of remittance on financial sector development in South Asia. Factors that drive financial development have a different impact in South Asia. Specially, economic growth and foreign direct investment (FDI) enhance financial development. Inflation and exports are to deteriorate financial development in the region.

Tafirei, M et al. (2014) reveals that deposit will decrease with the increase in inflation because it was expected that household will be encouraged to buy properties in order to cushion themselves against inflation and loss of purchasing power of money. It analyzed negative relationship between interest rate margin and deposit because lower returns will discourage potential savers, but found positive relationship with financial deepening and deposits.

Aviliani et al (2015) examined the impact of macro-economic indicator on the Bank's performance in Indonesia with the banking data ranging from 2006-2013 using Vector Error Correct Model (VECM) and found that exchange rate is the macro variable that contribute less on the performance of the bank. Study also suggested that inflation itself can influence positively or negatively on the performance of banks. Inflation caused by the development of the business cycle will cause an economy to experience a boom. Inflation usually has a greater effect on the revenue side than on the cost side, and may end by improving the bank's performance.

Md. Nazmul Haque (2016) through co-integration analysis found that deposit interest rate is negatively related to stock prices and money supply is positively related in the long run. This study also found short-run caused relationship.

Dewan and Nazrul (2016) explored the relationship between remittance and credit disbursement of the banking sector using the time series econometric techniques with monthly data spanning from 2006 to 2012 found out that there exists a bi-directional causality between the variables, which means when remittance increases, it leads to increase in total deposits of banks which results to increase in liquidity position of the banks which enables them to enhance credit disbursement. So the problem of lack of investment due to credit constraint was overcome and investment opportunities were improved in the country.

Shitsi Gakpey (2017) examined the macro-economic and financial variables on commercial bank deposit in Ghana and found long-run association between commercial bank deposit and explanatory variables. It also revealed short run association of bank deposits with inflation and growth of money.

From the review of empirical literature of financial and macro-economic variables on bank deposit, it is revealed that variables does not have exact impact on the total deposit and their significance and relationship varies from countries. So, this topic of study is still debatable issue. Therefore, this study will also contribute to the ongoing debate concerning the impact of major explanatory variables on total bank deposits.

III. Methodology

As the title suggest, this paper seeks identify the impact of some selected macro-economic and financial variables on bank deposits in Nepal for the period of 2009 Q4 to 2020 Q3. This data is based on quarterly basis. The main source of data are economic survey publish by Quarterly economic bulletins published by NRB, ministry of finance (MOF), and Central bureau of statistics (CBS). Different articles, conference papers, journals, newspapers.

Model specification

The model estimate in this study assume the endogenous variables as total deposits balance of banks and exogenous variables are financial variable as deposit interest rate, economic variables as broad money supply, NEPSE index, consumer price index, remittance inflow. In order to determine the effect of the above mentioned economic and financial variables on bank deposits in Nepal. The study employs the mathematical model as in (1) below:-

$$D_t = f(DIN_t, M2_t, NSI_t, CPI_t, REM_t).....(1)$$

Whereas,

D = Total bank deposits

DIN = Deposits interest rate

M2 = Broad money supply

CPI = Consumer price index (inflation)

REM = Remittance inflow

t = Time

Dependent Variable

Bank deposits: Bank deposits refers placement of funds into a banking institutions for interest earning and safety purpose. Banks offers all sorts of financial products to facilitate a customer in managing money in day to day basis. Mccaig & Stengos (2005) examined and found a positive effect on growth when financial intermediation is measured by total deposits.

Independent Variables

Deposit interest rate: Deposit interest rate is the percentage of interest paid by banks to its deposit account holder. The opportunity cost of holding money is the interest rates that got lost if the money is placed in interest bearing assets. Financial institutions always encourage longterm deposits from their clients by offering the benefits of extended interest rates as it offers more liquidity to the institutions.

Broad money supply: Money supply is one of the tools of monetary policy employed which assist in the economic stability of the money market and country's economy as a whole. In considers all the currency and liquid instruments circulating in country's economy at a given time period. money supply is expected to have negative relationship with the level of deposit in financial institution.

NEPSE Index: Stock market index is an index that helps the investor to compare their current stocks price levels with past prices to calculate market performance. It reflects the future growth of the economy and confidence level of people towards country's economy. NEPSE index is expected to be inversely related to deposits.

Consumer price index (inflation): CPI is a measure the changes in general price level of a weighted average market basket of goods and services purchased by households. In simple words, CPI is a proxy for inflation. Inflation is expected to have negative impact on customer bank deposit.

Remittance inflow: Remittance inflow refers foreign workers' earning and material resources transferred to his or her country of origin in which the migrant formerly resided. Remittance is a important factors that plays a significant role in the economic growth and development of most of under development and developing countries like Nepal. Here, Remittance inflow is expected to have positive effect in total bank deposits.

The study is based on time series data and empirical work based on time series data requires the underlying time series to be stationary. So, the study will begin with unit root testing to confirm its stationary. Under this study, unit root will be tested by employing augmented Dickey Fuller (ADF) test proposed by Dickey and Fuller (1979) and Phillips-Perron (PP) test proposed by Phillips and Perron (1988). PP test is expected to provide robust estimation in comparison with ADF test. The typical PP test equation below in equation (1).

$$\Delta Y_t = \alpha + \rho * Y_{t-1} + e_t \dots \dots \dots (1)$$

PP test is the t-value associated with the estimated coefficient of ρ . The data series is expected to be stationary if ρ is negative and significant.

B. Johansen Co-integration Model

Co-integration test is widely applied to investigate the co-movement of time series variables under consideration for a long time with in a equilibrium model. First, it establish long term relationship among variables and next, it provide correlation estimation with in an error correction model.

Johansen integration analysis starts with Vector Autoregression (VAR) of order p given by:

$$y_t = \mu + A_1 y_{t-1} + \dots + A_p y_{t-p} + e_t \dots \dots \dots (2)$$

where,

y_t is vector of non-stationarity $I(0)$ and e_t is vector of innovations.

We can rewrite VAR model as:

$$\Delta y_t = \mu + \Pi y_{t-1} + \Delta y_{t-1} + e_t \dots \dots \dots (3)$$

Where,

$$\Pi = -I \text{ and } \Gamma_i = -\dots \dots \dots (4)$$

Here, Granger's representation theorem states that if the coefficient matrix Π has reduced rank $r < n$, then there exist $n \times r$ matrices α and β each with rank r such as $\Pi = \alpha\beta$ and βy_t is stationary. r is the number of co-integrating relationship and each columns of β is the co-integrating vector.

$$J_{\text{trace}} = -T(1-\lambda_1) \dots \dots \dots (5)$$

$$J_{\text{max}} = -T \ln(1-\lambda_{r+1}) \dots \dots \dots (6)$$

The null hypothesis for the test is as follows:

$$H_0 = \beta_1 = \beta_2 = 0$$

Null hypothesis is rejected when trace is greater than the critical values at 1% or 5% which means atleast one of the coefficient is statistically significant (not equals to zero). If the co-integrated vector is estimated, we can conclude that there exist long run relationship among variables. In the same way, Johansen maximal eigen value method is applied to find the number of co-integrating vector.

Causality test is usually applied to identify the direction of the causal relationship between variables used. The result from the causal relationship can be either uni-directional or bi-directional between variables. The test estimates of the following equation can be considered simple bivariate dynamic model and is assumed that there does not exist any correlation between U_{1t} and U_{2t}

$$y_t = \alpha_1 + x_t + \beta_{11} y_{t-1} + \beta_{12} x_{t-1} + U_{1t} \dots \dots \dots (7)$$

$$x_t = \alpha_2 y_t + \beta_{21} y_{t-1} + \beta_{22} x_{t-1} + U_{2t} \dots \dots \dots (8)$$

IV. Results and Discussion

The summary of descriptive statistics provided in Table No. 1 will help us to get a proper insight of basic characteristics of the data. It serves as a preliminary analysis for the evaluation of the empirical impact of macro-economic variables on total deposits in financial institutions.

Positive values for the skewness tests suggests that data are skewed right which means that right tail is long relative to the left tail, and negative values for the skewness indicate data are skewed left which mean that left tail is long relative to the right tail. If the data are multi-modal, then this may affect the sign of the skewness. As the values of kurtosis for variables was less than 3, it indicates their distribution was flatter than normal distribution which meant values have wider spread around their mean. In the same way we can see that the Jarque-Bera test accepts the null hypothesis of normally distributed data for all the variables. It confirms the normal distribution of both real and financial variables under consideration.

Table 1: Summary of Descriptive Statistics

	TD	DIN	M2	NSE	CPI	REM
Mean	1500203	7.068182	1959521	939.1743	101.241	126626.2
Median	1271649	7.000000	1686655	954.795	99.65	129468.6
Maximum	2962172	8.000000	4230970	1803.7	134	223808.5
Minimum	687525.2	5.000000	661928.6	319.95	71.617	50211.1
Std. Dev.	685790.3	0.695424	1044771	453.0241	19.81037	47841.97
Skewness	0.501915	-0.298506	0.506692	0.124449	0.100094	-0.057665
Kurtosis	1.864121	3.264295	2.086118	1.736508	1.619194	2.045508
Jarque-Bera	4.212809	0.781506	3.413899	3.040333	3.56895	1.694653
Probability	0.121675	0.676547	0.181418	0.218675	0.167885	0.428559
Sum	66008950	311	86218933	41323.67	4454.602	5571552
Sum Sq. Dev.	2.02E+13	20.79545	4.69E+13	8824924	16875.39	9.84E+10
Observations	44	44	44	44	44	44

Source: EViews 8. Authors Computation.

The descriptive statistics for all six variables are shown in Table no. 1, a distribution is considered normal if the kurtosis and skewness are 3 and 0 respectively. From the above table 1, it can be observed that skewness values of all the variables of interest such as total deposits, deposit interest rate, broad money supply, NEPSE index, consumer price index (inflation), remittance are close to 0 which represent a normal distribution. In the kurtosis part as well all the variables of interest has values less than 3 which represent values have wider spread around their mean except deposit interest rate which has heavier tails and a sharper peak than normal distribution. From the probability values of variables in Jarque-Bera statistics; we fail to reject the null hypothesis at 5% level of significance implying that these variables have a normally distributed curve.

Unit root tests are tests for stationarity in a time series. We are using time series data in our analysis. There is a fundamental principle that time series data should be stationary. A time series has stationary if a shift in time doesn't cause a change in the shape of the distribution; unit roots are one cause for non-stationarity. Before estimation, we have to ensure that the data we are using in our analysis of all variables are stationary. For that purpose, the Augmented Dickey-Fuller (ADF) test and Phillips-Perron test (PP) is employed to access the presence or absence of unit root in the variables. The results for the Augmented Dickey-Fuller test is presented in table no. 2 and the Phillip-Perron test is presented in table no. 3.

Table 2: Stationarity result of the Augmented Dickey-Fuller Test

UNIT ROOT TEST RESULTS TABLE (ADF)

Null Hypothesis: the variable has a unit root

Order of Integration	Variables	At First Difference					
		d(TD)	d(DIN)	d(M2)	d(NSE)	d(CPI)	d(REM)

With Constant	t-Statistic	-4.1113	-5.4848	1.0554	-6.3912	-4.6336	-5.0762
	Prob.	0.0025	0	0.9963	0	0.0006	0.0002
		***	***	n0	***	***	***
With Constant & Trend	t-Statistic	-5.2656	-6.4286	-6.2809	-6.3108	-4.6691	-5.2115
	Prob.	0.0005	0	0	0	0.003	0.0008
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-0.1446	-5.4833	2.9068	-6.2955	-1.5314	-7.9947
	Prob.	0.6276	0	0.9986	0	0.1164	0
		n0	***	n0	***	n0	***

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant

Table 3: Stationarity result of the Phillips-Perron test

UNIT ROOT TEST RESULTS TABLE (PP)

Null Hypothesis: the variable has a unit root

At First Difference

Order of integration	Variables	d(TD)	d(DIN)	d(M2)	d(NSE)	d(CPI)	d(REM)
With Constant	t-Statistic	-4.1133	-5.4811	-2.7212	-6.424	-5.7779	-19.4786
	Prob.	0.0025	0	0.0789	0	0	0.0001
		***	***	*	***	***	***
With Constant & Trend	t-Statistic	-5.2785	-6.3838	-4.5907	-6.3504	-5.9414	-18.9544
	Prob.	0.0005	0	0.0035	0	0.0001	0
		***	***	***	***	***	***
Without Constant & Trend	t-Statistic	-1.8857	-5.4833	-1.0477	-6.3514	-4.8338	-8.0447
	Prob.	0.0573	0	0.2612	0	0	0
		*	***	n0	***	***	***

Notes: (*)Significant at the 10%; (**)Significant at the 5%; (***) Significant at the 1% and (no) Not Significant

Source: EViews 8. Authors Computation.

Table No. 2 shows the Augmented Dickey-Fuller results. The obtained ADF t-statistic was compared with the t-critical values. The rule of thumb for unit root test is that, if the p-value is less than 0.05 (5%), then in that case we can reject the null hypothesis of series has a unit root and claim that the series is stationary. All the variables ADF computation in first difference level with constant and trend revealed that all variables are significantly stationary at 1%, 5%, and 10% significance level.

Table No. 3 shows the Phillips Perron results. The decision rule and null hypothesis under the Phillips-Perron test is same as above Augmented Dickey-Fuller test (ADF). In PP Test at first difference level with constant, revealed that all variables in interest are found significantly stationary at 1%, 5% and 10% significance level. The results indicates that interested variables

are not stationary at their levels in both ADF and PP test but found all the series are stationary (both constant and trend) at first difference and therefore indicating that all variables are I(1).

From above result of unit root test, it provided having all the variables stationary at their first difference I(1), there is a possibility that variables have long-run relationship. For this purpose, this paper examines Johansen Cointegration test. Table 4 below reports the cointegrating relationship among the variables under consideration.

Table 4: Johansen Cointegration test

Series: TD DIN M2 NSE CPI REM

Lags interval (in first differences): 1 to 1

Hypothesized	Trace	0.05	Max-Eigen	0.05			
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**	Statistic	Critical Value	Prob.**
None	0.736606	153.1764	95.75366	0*	56.03232	40.07757	0.0004*
At most 1	0.592401	97.14413	69.81889	0.0001*	37.69376	33.87687	0.0167*
At most 2	0.484225	59.45037	47.85613	0.0028*	27.80758	27.58434	0.0468*
At most 3	0.392951	31.64279	29.79707	0.0303*	20.9641	21.13162	0.0527
At most 4	0.219458	10.6787	15.49471	0.232	10.40621	14.2646	0.1866
At most 5	0.006467	0.272484	3.841466	0.6017	0.272484	3.841466	0.6017

Notes: * denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table above shows the results for trace and maximum Eigenvalue test. Trace statistics states that there is exist atleast one cointegrated equation or variables are cointegrated. Maximum Eigenvalue test results states there exist atmost one cointegrated equation or variables are cointegrated. The test results indicates that there exist cointegration or long term association between the endogenous and exogenous variables under consideration and it also gives a meaning that there is one error term in the model.

Now, we can run the VECM because the variables are co-integrated.

The correlation estimation with in an error correction model is displayed below:

$$D(TD)=C(1)*(TD(-1)-115480.686499*DIN(-1)-0.986489189812*M2(-1)-472.713168332*NSE(-1)-7817.62946342*CPI(-1)+13.8833545866 *REM(-1)+728123.469702)$$

Table 5: Result showing Error Correction Model

	Coefficient	Std. Error	t-Statistic	Prob.
C(1)	-0.28816	0.093861	-3.07011	0.0048
C(2)	0.421342	0.204747	2.057864	0.0494
C(3)	-0.37385	0.201258	-1.85758	0.0742
C(4)	-30230.7	32257.02	-0.93718	0.357
C(5)	-52947.8	29120.16	-1.81825	0.0801

C(6)	-0.40049	0.192259	-2.0831	0.0468
C(7)	0.545661	0.195095	2.796895	0.0094
C(8)	36.79897	55.27744	0.665714	0.5112
C(9)	-2.57743	59.46425	-0.04334	0.9657
C(10)	-814.379	2909.302	-0.27992	0.7817
C(11)	-341.078	2711.711	-0.12578	0.9008
C(12)	2.189484	1.231722	1.77758	0.0867
C(13)	0.54761	0.791263	0.69207	0.4948
C(14)	34425.75	16439.46	2.094092	0.0458

In the above table, C(1) is the residual of the 1 period lag residual of the cointegrating vector between dependent and independent variables under observation. In this case, C(1) is negative and p value is also significant. Error correction term is significant and sign is negative, it means that deposit interest rate, money supply, NEPSE index, CPI (Inflation) and remittance has long run relation to total deposits.

Granger causality test is used to determine the predictive content of one variable in forecasting another beyond that inherent in the explanatory variables itself. In Granger causality test, variables need to be stationary. In our study, test statistics for unit root have already reported stationary by taking first difference. The study use two most common choices of information criteria AIC and SIC, and results shows test are sensitive to number of lags introduced in the model.

Table 6: Granger Causality Test

Direction of causality		No. of lags	F-Value	Pvalue
CPI	TD	2	4.65643	0.0157
TD	CPI	2	4.7865	0.0142
CPI	M2	2	3.30823	0.0477
M2	CPI	2	3.61535	0.0368
TD	DIN	2	4.49652	0.0179
M2	DIN	2	6.00315	0.0055
CPI	DIN	2	4.83191	0.0137
REM	CPI	2	6.81454	0.003

Table 6 shows Granger causality test output which portrays that there exist Bi-directional causality between Total deposit (TD) and CPI as well as CPI and M2. It also reveals uni-directional causality exist from total deposit (TD), money supply (M2), CPI (inflation) to Deposit Interest rate (DIN) and Remittance (REM) also granger cause CPI (Inflation).

This paper examined the interaction between total deposit and major economic and financial variables of Nepal. Quarterly data are employed and applied econometric model for co-integration test using Johansen co-integration approach and application of standard Granger Causality test to study variables interaction. Using Johansen co-integration test, our result shows there exist long-run relationship between total deposit and explanatory variables under consideration. The error correction model indicates explanatory variables have significant

impact on total bank deposit in Nepal. In the same way, standard Granger causality test provides the result of bi-directional link between total deposit and CPI, CPI (Inflation) and money supply. There also exist unidirectional link from total deposit, money supply, CPI to deposit interest rate and also found remittance granger cause CPI.

Finally, based on long-run results, it is concluded that economic and financial variables under study can stimulate long-run output growth of total deposit. Since, banks are the backbone of an economy and deposits plays a vital role on its existence for long-run and future growth. Hence, it provides evidence to the policy makers of banking institutions and Nepalese economy to think about the dependability over bank deposit interest rates, broad money supply, Nepalese stock market, inflation, and remittance inflow. Particularly, Nepal should adopt appropriate macro-economic and financial policies, practice fair and transparent competition within financial sector, develop strong and transparent institutional and legal framework for financial sector activities, and generate awareness for the proper utilization of remittance inflow for long-run output growth.

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