

Impact of Financial Development in Economic Growth of Nepal

Sangita Chaudhary

Lumbini Banijya Campus, Tribhuvan University, Nepal

Abstract: *This paper reviews the impact of financial development in economic growth of Nepal using secondary data covering the time period of 1994-2018, has been collected from different sources. Simple descriptive analysis, correlation analysis and simple & multiple regression analysis have been used to answer the problem statement and achieve the objectives of the research. The result reveals that there is positive and significant relationship between banking sector development and economic growth of country. However the capital market development and financial liberalization have negative relations with economic growth of country. Capital market development needs to be more inclusive. It should include real sector. In the context of Nepalese economy NRB's restriction is necessary to channeled the capital fund to productive sector through SLR and CRR.*

Keywords: *Stock Market Capitalization to GDP, Statutory Liquidity Ratio, Cash Reserve Ratio, Broad money to GDP, Traded turnover values, Market capitalization, Domestic credit to private sector by commercial banks*

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I. Introduction

The development of financial sector is theoretically significant for the acceleration of economy of the nation. Financial sector development plays the importance role in bringing the efficiency in the role of financial intermediaries. It also helps in capital creation by increasing the financial inclusion and financial liberalization. This theory has been proved by number of studies such as Gautam (2014); Vuong (2013); Abubakar and Gani (2013) and so on. Mohd and Rambeli (2017) revealed the reciprocal result and found the positive impact of economic growth in financial sector development.

However some literatures such as Lenee and Oki (2017); Adnan Hye and Wizarat (2013) find the negative and significant relationship between financial sector development and economic growth.

Amid these controversial findings, it is necessary to discuss and study more rigorously whether the financial sector development in the context of Nepal is positively and significantly influencing or not. Formal financial sector development in Nepal can be traced from the establishment of Nepal Bank Limited (Maskay & Subedi, n.d.).

Political revolution ended the 104-year old autocratic Rana regime in 1951. The regime was replaced by transitory multiparty democratic system. The Nepalese economy remained static as the country was virtually isolated from the rest of the world until then. Nepal, for the first time, formulated and presented annual budget in February 1951 and started maintaining Government accounts separately. At that time, the Nepalese economy was very primitive and traditional, heavily dominated by subsistence agriculture, low level of infrastructure and financial development, and very limited industrial activities. Within a few years, Nepal took initiative in building relations with the foreign countries and international institutions, joined the United Nations and started receiving financial assistance.

II. Literature Review

Abubakar and Gani (2013) examined the long run relationship between financial development indicators and economic growth in Nigeria over the period 1970-2010. The finding of the study revealed that in long run liquid liabilities and trade liberty has significant positive impact on economic growth and conversely the private sector credit, interest rate spread has negative influence in economic growth of Nigeria.

ADB Economic Working Paper Series 233 by (Estrada, Park, & Ramayandi, 2010) concluded that financial development has a significant positive effect on growth, especially in developing countries. Three indicators of financial development were taken as independent variables: Total liquid liabilities relative to GDP, Private credit by deposits money banks relative to GDP and stock market capitalization relative to GDP and

GDP per capita as the dependent variables and the data of 116 countries from 1987-2008 were taken for time series analysis.

Mishra et al. (2010) investigated the impact of capital market efficiency on economic growth of India using the time series data on market capitalization, total market turnover and stock market price index over the period from first quarter of 1991 to first quarter of 2010. The application of multiple regression model shows that the capital market in India has the potential of contributing to the economic growth of the country.

Similarly, (Paudel, Bhatta, & Khatri, 2018) made an attempt to identify the relationship between financial development and economic growth. Ratio to broad Money to GDP ratio, Private credit to GDP ratio, private investment to GDP ratio etc. were taken as independent variable and Real GDP as the dependent variable. In this way this research has tried to include both financial sector and real sector as indicators of financial development. The study concluded that there is long term and positive relationship between private credit to GDP ratio, ratio of private investment to GDP ratio & ratio of trade openness and GDP growth and negative relation between ratio of broad money to GDP and economic growth.

Mhadhbi, Terzi, and Bouchrika (2017) investigated the relationship between banking sector development and economic growth of 40 developing countries by using time series analysis for the period of 1970-2012. They use three measure of banking sector development; broad money supply, domestic credit provided by banking sector and domestic credit provided to the private sector. Some interesting conclusions emerge from this empirical study. First, none of the banking sector development indices causes economic growth in twenty three countries or for almost 57% of the sample, sixteen countries or for almost 40% of the sample, the “neutrality” hypothesis is supported as there was no causality in any direction between banking sector development and economic growth, i.e. at least 62% of the sample there is a causal relationship between banking sector development and economic.

Adnan Hye and Wizarat (2013) tried to explore the relationship between financial liberalization index and economic growth by using annual data for 1971-2007. The empirical finding indicates that the indicators of financial liberalization and economic growth are positively linked in the short run. However, they become statistically insignificant in the long run, while the impact of real interest rate on economic growth is negative and significant.

Nordin and Nordin (2016) investigated the influence of stock market and debt market on the Malaysian economy. This study employs time series data of year 1981 to year 2014. The debt market represents the combination of public debt and private debt. Meanwhile, the equity market is assessed based on the market capitalization of the shares listed on Bursa Malaysia. The conclusion that can be made from this study is that the capital market, in general, has a significant influence on the economy.

Mutulgun (2014) undertook a study on impact of financial development on economic growth of Turkey. This study covered the data from 1988 to 2014. Private credit and private credit as percent of domestic credit are independent variable or financial development proxy and GDP growth at constant price is taken as the proxy for economy growth. According to empirical results of our study, there is a significant and positive relationship between private credits and real GDP between the periods of 1988-2012. But while there is a short run relationship between variables, there is no long run relationship between them. Conversely, the direction of causality runs from economic growth to financial development.

Asghar and Hussain (2014) explored the role of financial development and trade openness in economic growth of developing countries by using time series data over the period of 1978-2012. The independent variables were ratio of broad money to GDP, ration of domestic credit provided by banking sector to GDP and ration of domestic credit to private sector to GDP. Whereas real GDP as the dependent variables. The results of the study point out low impact of financial development on economic growth. It may be due to the absence of well-developed and efficient financial system in these countries. Furthermore, the financial system in these countries is not backed by well-enforced financial institutions and weak financial institutions provide rooms for misallocation of resources which leads to poor economic growth.

Prochniak and Wasiak (2016) studied the impact of financial system on economic growth in the context of global crisis. The study was done about 28 EU counties and 34 OECD countries by using the national data of 1993 to 2013. Domestic credit provided by financial sector, bank nonperforming loans, bank capital to assets ratio, market capitalization of listed companies, turnover ratio of stocks traded, and the monetization ratio were used as the proxy of financial development. The paper analyzes the theoretical and empirical relationship between the financial system and economic growth attempting to answer the question on what level of financial system development positively influences GDP dynamics and which direction should a financial system develop in order to support economic growth. The results show that the size and the performance of the financial system have a significant impact on economic growth.

III. Data and Methodology

The study uses Time series data of 25 years covering 1994 to 2018 are taken for quantitative analysis. Researcher has tried to include data from both pre and post global financial crisis of 2008/9. The whole financial system in Nepal considered the population and financial intermediation i.e. BFIs, and capital market as sample for the study. banking sector development is described by broad money to GDP ratio, assets of commercial bank plus assets of NRB (percentage of GDP), and domestic credit to private sector by commercial banks (percentage of GDP); and capital market development is proxied by market capitalization (percentage of GDP) and traded turnover values (percentage of GDP); and financial liberalization described by statutory liquidity ratio and cash reserve ratio. The study uses ordinary least square (OLS) technique for estimation.

The model for this study can be developed as

$$\text{LnGDP} = \beta_0 + \beta_1 \text{BankDEV} + \beta_2 \text{CapDEV} + \beta_3 \text{FinLIB} + \varepsilon$$

LnGDP = Natural logarithm value of Nominal GDP

BankDEV = Banking sector development indices

CapDEV = Capital market development indices

FinLIB = Financial liberalization indicator

And β_0 is constant and β_i is coefficient of variables while ε the residual error of the regression.

The multivariate panel regression method is used to compute the estimates of the regression model stated above and all estimations have been performed in the econometrical software program. This model was useful and suitable because the research focus lied in examining the contemporaneous relationship between economic growth and financial development indicators

IV. Results and Discussion

Descriptive Statistics

In this section descriptive statistics for the dependent variable of sample banks; economic growth and explanatory variables involved in the regression model. Mean, maximum, minimum and standard deviation values are included in the table below. This table gives overall description about data used in the models.

In table 4.1 it can be seen from descriptive statistics table above nominal GDP at current prices has a positive mean with the value of NPR 697832.98 million during the 1994-2018 with standard deviation 811633.96. The maximum value of GDP during the period is NPR 3031034 million and minimum nominal GDP value is NPR 25530 million.

Table 4. 1: Descriptive Analysis of Dependent & Independent Variables

Variables	Minimum	Maximum	Mean	Std. Deviation
Nominal GDP at Current prices	25530	3031034	697832.98	811633.96
Broad money to GDP	35.02	102.09	60.38	20.34
Domestic credit to Private sector by Commercial Bank to GDP	18.00	87.00	43.16	20.76
Assets of Commercial bank plus NRB to GDP	64.00	139.00	92.32	21.91
Market capitalization to GDP	4.53	83.89	25.46	22.64
Traded turnover value to GDP	0.01	1.40	0.20	0.29

Similarly, in table 4.1 the mean value of ratio of broad money to GDP is 35.01 percent. The maximum value crossed the GDP size i.e. the maximum broad money is more than 102 percent of GDP with the standard deviation of 20.3392. The minimum and maximum value ranges from 35.01 percent to 102.09 percent.

Another important measure, domestic credit to private sector by commercial bank to GDP accounts 43.16 percent to GDP on an average with standard deviation 20.76. Till 2018 the maximum creation of private sector through financial system is 87 percent of GDP and it is 18 percent in minimum.

Similarly the mean value of assets of financial sector that is assets of commercial bank plus assets of NRB to GDP has the mean value of 92.32 percent with standard deviation 21.91. The maximum value of such assets reached to 139 percent of GDP with minimum value of 64 percent.

Share market capitalization or just market capitalization has mean value of 25.46 percent of GDP. The maximum market capitalization rises to 83.88 percent of GDP where as it compresses to 4.52 percent of GDP to its lowest. Traded turnover value to GDP has mean value of 0.20 percent with standard deviation of 0.2869. The maximum and minimum value of trading during analysis period is 1.40 percent and 0.01 percent respectively.

The other two variables measure the situation of financial inclusion in Nepalese financial sector. The average population per branch during 1994 to 2018 is 40985 people. There was a time, a branch of commercial bank serves 68652 people. However this has been improved dramatically and currently a branch of commercial bank is serving 9291 people.

Correlation Analysis among Constructs and Variable

In this section the Pearson correlation analysis among construct has been made. As already describes the constructs are being made under three independent variables:

Table 4. 2: *Correlation Analysis among Construct*

Correlation	LnGDP	BankDEV	CapDEV	FinLIB
LnGDP	1	.980**	.711**	-.522**
BankDEV		1	.770**	-.505*
CapDEV			1	-.525**
FinLIB				1

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Where,

- BankDEV = Indicator for banking sector development
- CapDEV = Indicator for Capital market development
- FinINC = Financial inclusion indicator
- FinLIB = Financial liberalization indicator

The correlation coefficient between economic growth and banking sector development indices is 0.980, which means there is positive correlation between economic growth and banking sector development indices. The corresponding p-value is 0.000, which is less than level of significance (α) = 0.01, signifying that there is significant relationship between economic growth and banking sector development indices.

The correlation coefficient between economic growth and capital market development indices is 0.711, which means there is positive correlation between economic growth and capital market development indices. The corresponding p-value is 0.000, which is less than level of significance (α) = 0.01, signifying that there is significant relationship between economic growth and capital market development indices.

The correlation coefficient between economic growth and financial liberalization indicator is -0.522, which means there is negative correlation between economic growth and financial liberalization indicator. The corresponding p-value is 0.007, which is less than level of significance (α) = 0.01, signifying that there is significant relationship between economic growth and financial liberalization indicator.

The correlation coefficient between banking sector development indices and capital market development indices is 0.770, which means there is positive correlation between banking sector development indices and capital market development indices. The corresponding p-value is 0.000, which is less than level of significance (α) = 0.01, signifying that there is significant relationship between banking sector development indices and capital market development indices.

The correlation coefficient between banking sector development indices and financial liberalization indicator is -0.505, which means there is negative correlation banking sector development indices and financial liberalization indicator. The corresponding p-value is 0.010, which is less than level of significance (α) = 0.05, signifying that there is significant relationship between banking sector development indices and financial liberalization indicator.

The correlation coefficient between capital market development indices and financial liberalization indicator is -0.525, which means there is negative correlation between capital market development indices and financial liberalization indicator. The corresponding p-value is 0.007, which is less than level of significance (α) = 0.01, signifying that there is significant relationship between capital market development indices and financial liberalization indicator

Regression Analysis

Regression estimates are used to describe the data and to explain the relationship between one dependent variable and one or more independent variables. Simple linear regression is similar to correlation as both of them measures to what extent there is linear relationship between the two variables. But the major difference between these two is that correlation makes no distinction between independent and dependent variables while linear regression does. This section consists of multicollinearity test and regression model.

Table 4. 3: *Regression Analysis of Variables*

	Beta Coefficient	T value	P value	VIF
(Constant)	16.820	25.611	.000	
BankDEV	2.625	16.761	.000	2.540
CapDEV	-0.113	-1.997	.159	2.614
FinLIB	-0.245	-0.060	.214	1.430
R square	.968			
F value	209.887			
P value	.000			

Coefficient of determination that is R square value shows that 96.8 percent changes in the dependent variable is influenced by independent variables.

F-value 209.887 and P value is 0.000 which is less than 0.05. Hence it can be concluded that there is significant relationship between dependent variable and independent variables

V. Conclusion

This study has answered out the entire questions which were raised on Chapter 1. The first question is about the direction of relationship between economic growth financial developments. Another is about identifying the overall impact of financial development in economic growth. Or it is about identifying the impact of explanatory variables into dependent variables. The answers of these questions have been mentioned on the data analysis part. The limitations as well as suggestions for further research have also been discussed. This part of the research gives the conclusion for the study by presenting main points to answer the research questions and fulfilling the objectives.

The first objective of this study was to explore the relationship between banking sector development and economic growth. The result from regression analysis revealed that there is positive and significant relationship between banking sector development and economic growth.

The second objective of this study was to identify the relationship between capital market development and economic growth. The quantitative section shows that there is negative relationship between those. This also proves that capital market doesn't show the real picture of economy.

Finally the last objectives of this study was to explore the relationship between financial liberalization and economic growth. The regression coefficient in quantitative analysis part shows that there is negative and insignificant relationship between those two variables.

At nutshell there is positive and significant relationship between overall financial sector development and economic growth of the country. This was also explained by value of coefficient of determination at quantitative part of this research.

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