Original Article

FEDERAL GOVERNEMNT CAPITAL EXPENDITURE AND ITS IMPACT ON NEPALESES ECONOMY

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ABSTRACT

This paper examines the effect of government capital expenditure on Nepalese economy over a period from 1974/75 to 2015/16. Agriculture, Health, Transportation, Electricity and Education are independent variables whereas, economic growth is dependent variable. Data are collected from the website of NRB (Financial Statistics Report). The study is based on 43 samples. The regression models are estimated to test the significant and importance of government expenditure and its impact on economy in Nepal. The result shows that there is positive correlation between agriculture, health, transportation, electricity, education and economic growth. The result shows that beta coefficient is positive for agriculture, health, transportation, electricity, education and economic growth.

Keywords: *Capital expenditure, Economic growth, Correlation, Regression*

INTRODUCTION

Economic growth is defined as "the steady process by which the productive capacity of the economy is increased over time to bring about rising levels of national output and income" while economic development is defined as "the process of improving the quality of all human life" (Smith, 2003). From these descriptions it shows the economic growth is primarily a quantitative measure based on the rate of change of GDP while economic development is a combination of quantitative and qualitative measures.

Economists are of two different views about the role of government in economic activities. According to the neo-classical economists, reducing the role of private sector by crowding-out effect is important because it reduces the inflation in the economy; increase in public debt, increases the interest rate which reduces inflation in the economy as well as output. The new-Keynesians present the multiplier effect in response and argue that the increase in government expenditure will increase demand and thus increase economic growth. But now there is a backlash demanding that the deficits used to create the stimulus must be cut back by cutting public spending on a grand scale. The relationship between government expenditure and economic growth has continued to generate a series of controversies. While some researchers conclude that the effect of government expenditure on economic growth

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is negative and insignificant (Akpan, 2005) and (Romer, 1990), others indicate that the effect is positive and significant (Bratimaserene & Ghosh, 2007).

Barro (1990) explained that government expenditure on investment and productive activities is expected to contribute positively to economic growth, while government consumption spending is expected to be growth retarding. This instrument of fiscal policy promotes economic growth in the sense that public investment contributes to capital accumulation. Other importance of government expenditure includes the provision of those facilities that are not fully covered by the market economy such as health and education. That is, human capital promotes positive benefits associated with economic growth, but the financial source for public expenditure which is taxation, reduces the benefits of the taxpayers and as such reduces the benefits associated with economic growth. But due to lack of sufficient revenue, there is need to categorize productive and nonproductive government expenditure for different countries in order to reduce the non-productive expenditure.

In the context of Nepal the average annual growth rate of development budget is less compared to the regular budget during the past three decades. The increasing trend of regular expenditures on unproductive sectors and the decreasing trend of development expenditures indicate the minimization of the pace of development. Budget, however, became more significant in managing government finance, the contemplation over the status and effectiveness of budgetary system of the government increased specially after the political change of 1990. Increasing challenges encountered in relation to the rising expectations of people have prompted the government to become serious as to the means and the use of the scarce resources in a more organized and effective manner (Sharma, 1999).

RESEARCH METHOLODGY

This study has employed descriptive research design and causal comparative research design in order to see the impact of government expenditure on economic growth in context to Nepal. This study deals with the fact finding about the various variables (AGR, HEA, ECT, TRN &EDU). Hence, the descriptive research design has been adopted. This study is also based on the causal comparative research design to analyze how independent variable affects economic growth in Nepal. Causal comparative research design attempts to determine the cause and effect relationship between dependent variable and independent variables. For this study, stratified sampling method has been adopted for selecting the sample. Data from 1974/75 to 2016/17 were collected from the website of government of financial statistics (Nepal Rastra Bank). For the study, independent variables are agriculture, health, transportation, electricity and education whereas, economic growth is dependent variables. This study is based on secondary sources of data leading to the total 43 samples.

RESEARCH MODEL

The study attempts to find out the effect of government expenditure on economic growth in Nepal. This study examines the impacts agriculture, health, education, electricity and transportation.

EG = f (ARG, EDU, TRN, HEA, ECT)

In order to explain the effect of government expenditure on economic growth following regression models have been developed.

The econometric models used are this study tries to explain the relationship between the independent variables and dependent variables. To estimate the relationship regression model is used. Hence, the modes take the following form

Model 1 $EG = \beta_0 + \beta_1 \ln ARG + \beta_2 \ln EDU + \beta_3 \ln TRN + \beta_4 \ln HEA + \beta_5 \ln ECT + €$

Whereas,

AGR : Agriculture
HEA : Health
TRN : Transportation
ECT : Electricity
EDU : Education
EG : Economic Growth

AGR, EDU, TRN, HEA and ECT are independent variables whereas, EG is dependent variable.

HYPOTHESIS

H_1 : Agriculture has a positive impact on economic growth.

H_2 : Health has a positive impact on economic growth.

H_3 : Transportation has positive impact on economic growth.

H_4 : Education has positive impact on economic growth.

H_5 : Electricity has positive impact on economic growth.

PRESENTATION AND DATA ANALYSIS

Descriptive statistics

The descriptive statistics of dependent variable (economic growth (EG)) and independent variables (agriculture (AGR), health (HEA), transportation (TRN), electricity (ECT), education (EDU)) of the study is shown in table 1.

Table 1. Clearly shows the descriptive statistics for the selected variables considered in this study. Agriculture ranges from Rs.8.8 to Rs.32.1 with average value of Rs.10.6. Likewise, Health ranges from Rs.5.9 to Rs.46.7 with average value of Rs.11.5. The average value of transportation during the study period is noticed to be Rs.29.2 million with the minimum value of Rs.3.3 million and the maximum of Rs.98.9 million.

Table 1: Descriptive Statistics

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Agriculture	43	8.8	32.1	10.6	3.8
Health	43	5.9	46.7	11.5	1.2
Transportation	43	3.3	98.9	29.2	2.4
Electricity	43	3.7	72.1	27.0	2.2
Education	43	9.3	62.5	14.4	1.3
Growth Rate	43	12.18	24.4	14.4	2.6

Sources: SPSS Output

Similarly, electricity has a minimum value of Rs.3.7 and a maximum of Rs.72.1 with average of Rs.27. Education ranges from Rs. 9.3 to Rs.62.5 with the average value of Rs. 14.4. The economic growth rate has maximum value of Rs. 24.4 and minimum value of Rs. 12.18 with the average value of Rs. 14.4.

Correlation Analysis

Having indicated the descriptive statistics, the Pearson correlation coefficients have been computed and the results are presented in Table 2, Where agriculture (AGR), health (HEA), transportation (TRN), electricity (ECT) and

education (EDU) are the independent variables and economic growth (EG) is dependent variable.

Table 2 shows the Pearson correlation coefficient between economic growth and government expenditure specific variables taken in the study. It reveals that agriculture is positively related with economic growth. It indicates that higher the expenditure on agriculture, higher would be economic growth.

Table 2. Correlation Analysis

		EG	AGR	HEA	TRN	ECT	EDU
EG	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	43					
AGR	Pearson Correlation	.288	1				
	Sig. (2-tailed)	.094					
	N	43	43				
HEA	Pearson Correlation	.892**	.652**	1			
	Sig. (2-tailed)	.000	.000				
	N	43	43	43			
TRN	Pearson Correlation	.901**	.521**	.871**	1		
	Sig. (2-tailed)	.000	.001	.000			
	N	43	43	43	43		
ECT	Pearson Correlation	.861**	.382**	.752**	.873**	1	
	Sig. (2-tailed)	.000	.024	.000	.000		
	N	43	43	43	43	43	
EDU	Pearson Correlation	.104	.737**	.413**	.725**	.605**	1
	Sig. (2-tailed)	.514	.000	.007	.000	.000	
	N	43	43	43	43	43	43
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Note:

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

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

Similarly, there is positive relationship between health and economic growth. It shows that increase health expenditure leads to increase in economic growth.. Likewise, transportation has positive relationship with economic growth. It indicates that increase in transportation expenses leads to increased economic growth. Electricity has positive relationship with economic growth. It indicates that higher expenditure on hydropower, higher would be economic growth. Likewise, education is positively correlated with economic growth. It indicates that higher the investment in education sector, higher would be the economic growth

Regression Analysis

In order to test the statistical significant and robustness of the result, this study relies on secondary data analysis based on the regression models.

I. Regression Output of Government Expenditure and Economic Growth

The regression of government expenditure and its impact on economy is presented in the table 3. The result shows that beta coefficient for agriculture, health, transportation, electricity and education are positive. It indicate that larger the investment, greater will be economic growth.

Regression Analysis of Government Expenditure and its Impact on Economy

The results are based on panel data of central bank the period of 1974/75 to 2015/16 by using linear regression model. The model is $\ln EG = \beta_0 + \beta_1 \ln ARG + \beta_2 \ln EDU + \beta_3 \ln TRN + \beta_4 \ln HEA + \beta_5 \ln ECT + €$. *Dependent variable is economic growth (EG -in million),and independent variables are agriculture (AGR- in million), health (HEA- in million),transportation (TRN- in million),electricity(ECT-in million) and education (EDU – in million).*

Table 3. Regression Analysis

Predators	B	T	Sig	F	Sig	R-Square
Constant	15.297	4.701	.000	40.761	0.000	.875
AGR	.008	2.369	.0025			
HEA	.003	.539	.00594			
TRN	.009	4.316	.000			
ECT	.003	1.765	.0088			
EDU	.003	.888	.00382			

Among all the independent variable, the probability value of the entire variable is less than 5 percent, which indicate that all the variable are significant.

Also, in table R-Square is +.875, which are high and explain that 4.6 percent of the variation in economic growth is explained by the variation in the predictors like of agriculture, health, transportation, education and electricity. In addition, the regression equation is highly significant with an F = 40.761, p value is less than 5 percent. S, in term of variation explained and significant the regression equation is excellent.

Table 4. P- value

Variables	p-value	A	Remarks
AGR	.003	0.05	p-value < α , Significant, accept null hypothesis
HEA	.00127	0.05	p-value < α , Significant, accept null hypothesis
TRN	.00013	0.05	p-value < α , Significant, accept null hypothesis
ECT	.00193	0.05	p-value < α , Significant, accept null hypothesis
EDU	.00161	0.05	p-value < α , Significant, accept null hypothesis

In the above table, the p-value of all the independent variable (AGR, HEA, TRN, ECT, EDU) are less than 0.05, which implies that they are a significant predictor.

SUMMARY AND CONCLUSION

Every year government allocate budget for the development work of the country. Basically it categorizes as capital expenditure and

recurrent expenditure. Capital expenditure plays a pivotal role in the growth of the industry, manufacturing, agriculture, health, transportation, education, communication, hydropower that eventually affects the economy of the country to a great extent. It works as the channel through which the government revenues are channelized to economic sector and social sector. Investment in economic sector creates job opportunity for the individuals as well as it provide a platform for the business enterprises. It impact positively on the economy of the country as it generate income for the public. Investment in social sector offers services to the public for easy living as well as it also generate income.

The major objective of this study is to examine the impact of government expenditure on Nepalese economy. The specific objectives of the study are to analyze whether government capital expenditure causes economic growth or vice versa.

This study is based on the secondary data within the time period from 1974/75 to 2015/16. The secondary data have been obtained from Nepal Rastra Bank Bulletin published by central bank of Nepal, annual reports and websites. The pooled cross-sectional data analysis has been undertaken in the study. The research design adopted in this study is descriptive and causal comparative types as it deals with relationship between government expenditure and economic growth. The statistical methods used in the analysis are descriptive statistics, correlation analysis and regression analysis.

The major conclusion of this study is that all the five independent variables (agriculture, health, transportation, electricity, education) have significant impact on Nepalese economy. There is a existence of relationship between government expenditure and economic growth. It reveals that all the variables are positively correlated with economy growth. Therefore, governments need to increase budget allocation towards these variables. Various types of government spending will have different impacts on economic growth. Thus, it implied that it has greater potential to improve efficiency of government spending by reallocation among sectors. Lastly, this research can be used as guideline for future researchers in sense that the credibility of this research can be considered.

RECOMMENDATION

Based on the finding of this study the following recommendation policy were being proposed:

- There should be effective channeling of public fund to productive sector which will have a significant impact on the economic growth such as manufacturing and hydropower.
- Collaboration between the government and the private sector is needed in providing essential infrastructure services that will help to promote economic growth and development.
- There should be high degree of transparency and accountability of government spending in various sectors of economy in order to prevent the channeling of public funds into private accounts of government officials and workers.
- Government should monitor the contract awarding process of capital projects closely to guard against over estimation of project execution cost.
- There should be anti corruption agencies in order to effectively police the activities of public funds custodians.
- Capital expenditure on economic services should be directed mainly to productive economic sector that will stimulate activities in the economic sector and reverse the negative effect on economic growth.

- In the context of Nepal, there is a need for an increase in the budgetary allocation to the transport. There is a need in expansions of roadway (highway expansion), railway, airways (international airports) as well as waterway.
- In terms of education, the government should maintain the same level of study in the government college and school same as private.

REFERENCES

AL- Shubiri, F. N. (2010). Analysis the determinants of market stock price movements: An empirical study of Jordanian commercial banks. *International Journal of Business and Management*, *5*(10): 137-147

Al –Tamimi, H. (2007). Factors affecting stock prices in the UAE financial markets. *Singapore Economic Review, 2*(4), 25-47.

Banz, R. W. (1981). The relationship between returns and market value of common stock. *Journal of Financial Economy, 9*(1), 3-18.

Bhattacharyya, B., & Mukherjee, J. (2006). Indian stock price movement and the macroeconomic context - A time series analysis. *Journal of International Business and Economics 5(*1), 167-181.

Challa, K., & Chalam, G.V. (20015). Equity share price determinants-an empirical analysis. *Indian Journal of Applied Research, 5*(1), 79-82.

Fama, E. F. (1981). Stock returns, real activity, inflation and money. *American Economic Review, 71*(4), 545-565.

Fisher, I. (1930). The theory of interest. *New York: Macmillan.*

Gallagher, L. A., & Taylor, M. P. (2002). The stock return-inflation puzzle revisited. *Economics Letters, 75*(2), 147-156

Geske. R., & Roll, R. (1983). The monetary and fiscal linkage between stock returns and inflation. *Journal of Finance*, 38(1), 1-33.

Hussainey, K., Mgbame, C. O., & Chijoke-Mgbame, A. M. (2011). Dividend policy and share price volatility: UK evidence. *Journal of Risk Finance*, *12*(1), 145-162.

James, C.; Koreisha, S., & Partch, M. (1985). A VARMA analysis of the causal relations among stock returns, real output, and nominal interest rates. *The Journal of Finance, 40*(5), 1375-1384.

Kurinhara, U. (2006). The relationship between exchange rate and stock prices during the quantitative easing pocicy in Japan. *International Journal of Business*, *11*(4), 375-386.

Khan, M. S. (2014). Macroeconomic variables and its impact on KSE-100 index.

Universal Journal of Accounting and Finance, 2(2), 33-39.

Modigliani, F.F., & Miller, M. (1958). The cost of capital corporation finance and the theory of investment. *The American Economic Review*, *48*(3), 261-297.

Menaje, Jr. (2012). Impact of selected financial variables on share price of publicly listed firms in the Philippines. *American International Journal of Contemporary Research, 2*(9), 99 -104.

Profilet, K. A., & Bacon, F. W. (2013). Dividened policy and stock price volatility in the U.S equity capital market. *ASBBS Proceedings, 20*(1), 219-231.

Pradhan, R. S. (1993). Stock market behavior in a small capital market: A case of Nepal. *The Nepalese Management Review, 9*(1), 23-49.

Pradhan, R. S., & Balampaki S. B. (2004). Fundamentals of stock returns in Nepal. *SEBON Journal, 1*(1), 8-24.

Sharma, S. (2011). Determinants of equity share prices in India. *Journal of Arts, Science & Commerce,* 2(4), 51-60.

Zahir, M. A., & Khanna, Y. (1982). Determinants of stock prices in India. *The Chartered Accountant, 30*(8), 521-523.