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Analysis of Public Expenditure Policy Regime and Its Relationship with Economic Growth over Different Political Regimes of Nepal

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DOI: https://doi.org/10.3126/nutaj.v9i1-2.53847

Abstract

This study analyzes trend and pattern of public expenditure and relationship with economic growth in Nepal by using descriptive, trend, ratio and correlation method based on secondary data from 1975 to 2019. As a result, a trend of recurrent expenditure (RE) is inclining with positive growth, a trend of government expenditure (GE) is also inclining. However, it is different in case of capital expenditure (CE) because of consistent trend. Recurrent expenditure is unnecessarily expansionary but capital expenditure is unnecessarily contractionary. Recurrent expenditure (RE) is positively correlated with Government expenditure (GE) and capital expenditure (CE) is negatively correlated with Government expenditure (GE). It shows the expansionary budgetary policy doesn't influence on CE but can be seen in GE and RE. Lastly, the annual positive change of regular expenditure in the share of public expenditure is higher than in the share of GDP. Whereas, the annual negative change of capital expenditure in the share of public expenditure is higher than in the share of GDP. Thus, uncontrolled expansionary regular expenditure and unnecessarily contractionary capital expenditure are big issues to macro-economic stability and higher economic growth of Nepal. This paper is expected to contribute to understand public expenditure and its linkage with economic growth and to formulate public expenditure framework.

Keywords: public expenditure, GDP, capital expenditure, economic growth

Introduction

Change in public expenditure-either increasing or decreasing is a fiscal shock of macro-economic policy regime. As inbuilt, this change is tuned with macro-economic indicators- macro-economic stability, and economic growth(Bista, 2022; Chaudhary, 2010; Munir & Riaz, 2020).. Somehow, it is short and long term need of the national economy to respond fluctuation and disequilibrium of external and internal sectors, as well as to fuel growth drivers in the current highly integrated, competitive, and technological led world (Bose, & Bhanumurthy, 2015;De Castro, 2003; Yoshida, & Kenmochi, 2011;Yen, Ong, & Ooi, 2015). In this fiscal shock, contraction is widely used in developed countries for macro-economic stability (Popa & Codreanu, 2010). Reversely, expansionary fiscal shock is popular in developing countries for macro-economic stability and higher economic growth (Goyal, & Sharma, 2018; Gupta & Verhoeven, 2001, Munir & Riaz, 2020;Popa & Codreanu, 2010).

Adopting expansionary fiscal policy led public expenditure is a popular, easy, and tailored fitted budgetary policy across the world, particularly developing countries (Manikow, 2007&Mainali, 2012). This is a supply led approach in which the government supplies more money resulting more productive economic activities and more push for higher economic growth(Garry, & Rivas Valdivia, 2017). Like as per common macro-economic theoretical arguments, this policy aims to achieve dual targets such as macro-economic stability and rapid economic growth in developing countries (Guru, 2021). For instance, financial crisis in 2008 recessed the global economy, although it was a burst of housing bubble in USA. Its reason was a cheap credit and lax lending standards fueled a housing bubble. Its consequence was trillion-dollar loss and massive unemployment. The government of USA adopted expansionary public expenditure policy under which fiscal stimulus packages were endorsed to revive the recession to achieve stabilization and economic growth (Bose & Bhanumurthy, 2015; Fligstein, Brundage, & Schultz, 2014, Jain & Kumar, 2013). This budgetary policy is based a core theoretical idea of Keynesian Economics and Wagner's Law (Čapek, & Cuaresma, 2020;Galí, López-Salido, & Vallés, 2007,Keynes, 1967, &Pérez-Montiel2020). In the developing economies, resource base and sources are limited to fuel this policy without a wider budget deficit because of mass poverty, mass unemployment, and low economic growth. Thus, it leads deficit financing by debt. Thus, this expansionary high volume public expenditure is being a re-bouncing threat to macro-economic stability and economic growth. However, its multiplier effect on GDP measures the efficiency of public expenditure(Batini, Eyraud, Forni, & Weber, 2014; Blanchard & Leigh, 2013,Garry & Rivas Valdivia, 2017; Hamer-Adams & Wong, 2018; Jain & Kumar, 2013; Perez-Montiel, 2020;Naqvi, Iftikhar, & Ali, 2019; Ramey, & Zubairy, 2018; Restrepo, 2020).

Expanding public expenditure budget size in 2022 for 2022-23, the budget of Nepal (2022) aims two major objectives: macro-economic stability and economic growth, like as the previous budget of Nepal (Bista, 2016, Bista, 2021; Kunwar, 2019; MoF, 2022).Its logic is to meet development and growth demand in the country. It is well said all different political regimes of Nepal having similar menu of expansionary public expenditure fiscal shock for development intervention and drives. For instance, public expenditure-GDP ratio in 2019 quadrupled to 33.95 percent from 9.53 percent in 1975. Macro-economic stability is not as desired. Average economic growth rate from 1975 to 2019 is just around 4 percent. Similarly, capital-regular expenditure ratio in public expenditure-GDP ratio has been in decline at 21.75 percent in 2019, relative to 64 percent in 1975.How to secure poor, marginal, and old aged people in Nepal is a big question to the socialistic political party because these parties are pro-poor, pro-marginal and pro-old aged people and these parties believe that inclusion, economic equity and social justice can secure the poor, marginal and old aged people. Therefore, cash distribution may be a better instrument in the name of social security and old aged allowances for economic equity and social justice (Bista, 2021). In this approach, first time UML led minority government introduced old-aged allowance with Rs. 100 per month through their popular budget. For this program, public expenditure policy was made expansionary for social security and justice and welfare for vote and popularity. NPC (2020) points out it as poor function of public expenditure, inefficiency in budget allocation, mobilization and execution, and issue of compliance to fiscal discipline, accountability, productivity, and transparency (Sharma, 2013). These unstable macro-economic indicators are being a big issue in the frontier growth theory. Therefore, this is an important issue to be understood in depth in the discipline of public economics, policy economics, and macro-economic.

In Nepal, few relevant empirical literatures are available on the co-integration and causal between public expenditure and economic growth, along with different dimension and effects of public expenditure. Studies by Bista and Sakhi (2022), Kunwar (2019), Bhusal (2014) and Kharel (2012) argued positive causal relationship between public expenditure and economic growth based on time series data and co-integration and casual effect model in Nepal. Differently, Chaudhary (2010) has proved that large government expenditure has negative impact on economic development. However, these literatures have not fill up a gap of public expenditure trend and public expenditure policy regime over different policy regimes.

This context of expansionary public expenditure in Nepal makes a dilemma in which this study examines whether an expansionary public expenditure is different in the different policy regimes in Nepal, and whether an expansionary public expenditure contributes to economic growth over the different policy regimes. It is expected that this study contributes to draw out comparative public expenditure status and trend and policy regimes in the different policy regimes for exploring an alternative for sustainable macro-economic stability and higher economic growth.

The broad objective of this study is to analyze trend and pattern of public expenditure and relationship with economic growth in Nepal. The specific objectives of this study are:

- to analyze trend and pattern of public expenditure in Nepal
- to examine the relationship of public expenditure with economic growth in Nepal
- to identify issues and its policy implications

Methods and Materials

Methods in which research design is explorative cum descriptive to understand trend and pattern of two macro-economic variables: public expenditure (fiscal variable) and economic growth (macro variable). In this research design, quantitative method was employed. Nature of quantitative data sets was secondary collected from secondary sources such as Governmental Financial Statistics of Nepal Rastra Bank, Economic Survey, Ministry of Finance and Statistical data sets of Central Beau rue of Statistics. Nature of secondary data was time series. It was 34 years' from 1974-75 to 2018-19.

Results

The basic idea of Keynesian economics is *the state led*, like the basic idea of Marx-Angel and Mao. However, Keynesian idea is in the free market approach of Milton Freedman to solve recession and depression phases of trade cycle for recovery of the economy, although Marx-Angel and Mao idea is for communism led socialism political mission and goal for equity and justice. In this contrast, almost developing countries have adopted the Keynesian state led development model in the mixed version of capitalism and socialism since 1960s. In this model, expansionary fiscal policy is major tool under which public expenditure is expansionary in the constant of public revenue to achieve the expected outcomes in national income, national output, employment and economic growth.

In Nepal, public expenditure is a major discretionary expansionary instrument as the expansionary fiscal policy to the growth of regular and capital expenditure intervention to create socio-economic infrastructure and human capital development for employment generation induced aggregate demand and to promote productive activities of economic sectors for higher economic growth rate. Over 70 years long journey, Nepal has been in three different political regimes with different political philosophies: a) Panchayat Regime (1975-1990), b) Democracy (1990-2005) and c) Republic Democracy (2006-2019) for democracy, development and welfare. In these three regimes, their response and treatment on public expenditure are quite different with their performance of economic growth rate. Therefore, the study has a query about trend and pattern the growth of public expenditures and public expenditure-GDP ratio with the following questions.

- How much growth rate of public expenditure, regular and capital expenditure over 70 years development and in these three different regimes?
- What is structure of public expenditure-GDP ratio, capital expenditure-GDP ratio and regular expenditure-GDP ratio?
- What is the relationship between economic growth and capital expenditure-GDP ratio and regular expenditure-GDP ratio?

Descriptive Statistics of Public Expenditure and Public Expenditure–GDP Ratio

Government expenditure is a public expenditure**.** it is of two dimensions: regular expenditure (RE) and capital expenditure (CE)**.** In fiscal policy (budgetary policy**),** Regular expenditure accounts expenditure on regular functional activities of the government for good governance and law and order maintenance, whereas capital expenditure accounts expenditure on capital development activities of the government for increasing infrastructure, output, income, and employment for stability and growth. This is a query about its descriptive statistics for understanding its status and pattern in the country.

Table 1: Descriptive Statistics of Public Expenditure

Description	Min.	Max.	Mean	Std. Deviation
RE	4	20	9.64	5.22
CE	4	12	8.18	3.08
GE	13	33	20.02	5.48
FE	1.64	5.80	4.43	1.25

Table 1 presents mean and standard deviation of key variables of trend analysis. In column 1, there are four variables: RE, CE, GE and EC. Thus, mean of these variables represent properly time series data of RE, CE, GE and FE.

Similarly, there is a query about its contribution to GDP. Table 2 presents public expenditure-GDP ratio in three major political regimes from 1975 to 2019 in Nepal.

Table 2: Public Expenditure-GDP ratio and Political Regimes

Regime		share of GE (%)			ratio to GDP (%)		
	Year	RE	CE	FE	RE	CE	GE
Panchayat Regime	1975-1990	30.99	66.7	2.31	5.22	11.34	16.97
Democracy I: Ceremonial Monarch	1991-2005	46.79	45.66	7.56	8.35	8.24	17.93
Democracy II: Federal System	2006-2019	64.51	22.10	13.39	16.32	5.58	25.32

Table 2 presents mean of three public expenditures variables with GE and GDP: RE, CE and FE –GE ratio and –GDP ratio in percent. In row, there are three variables RE, CE, and GE. In column 1, there are three periods: Panchayat Regime (1975-1990), Democracy I: ceremonial Monarch (1991-2005) and Democracy II: Federal (2006-2019). Thus, average percentage share of GE and ratio to GDP of these variables represent properly cross sectional data of RE, CE, and FE.

Trend and Pattern Analysis of Public Expenditure and Public Expenditure-GDP Ratio

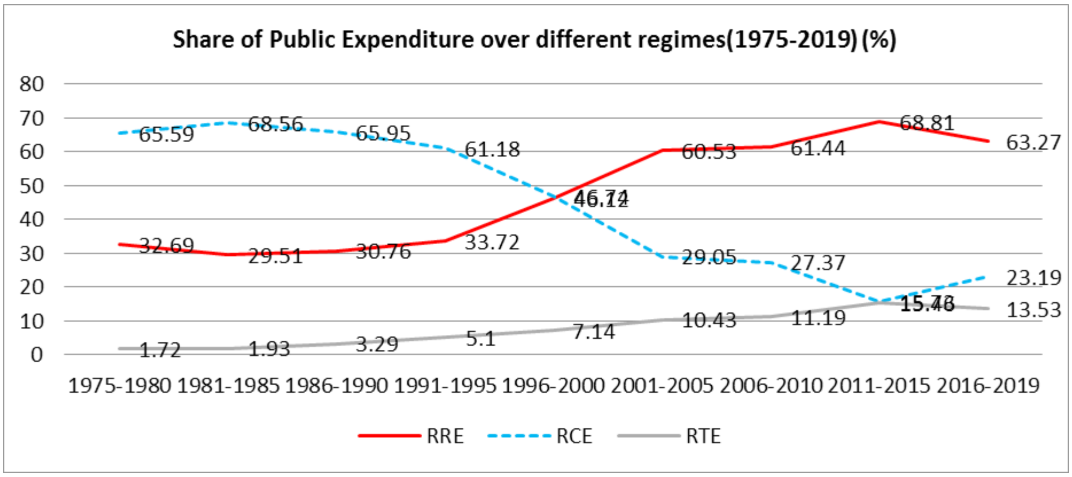

Figure 1: Trend of Public Expenditure over Different Political Regimes

Trend and pattern of public expenditure and public expenditure-GDP ratio are important to understand movement of public expenditure in history to predict its future walk. As a complement, pattern of public expenditure and public expenditure-GDP ratio provides their nature and form. This study expects to understand their current and future movement as well as their nature and form.

Figure 1 shows trend and pattern of public expenditure from 1975 to 2019. It has presented trend and pattern of public expenditure including three categories: recurrent expenditure (RE), capital expenditure (CE) and financial expenditure (FE). In this figure, trend and pattern of these variables are responding per annum time from 1975 to 2019.

Trend and pattern of Public Expenditure-GDP ratio and its components

Public expenditure-GDP ratio is an important macro-economic indicator to understand status, trend and pattern of government expenditure in terms of national economy (GDP). In another words, it is accounted in the constraint of GDP. Figure 2 illustrates a trend of public expenditure-GDP ratio from 1975 to 2019.

Figure 2: Public Expenditure-GDP ratio Trend

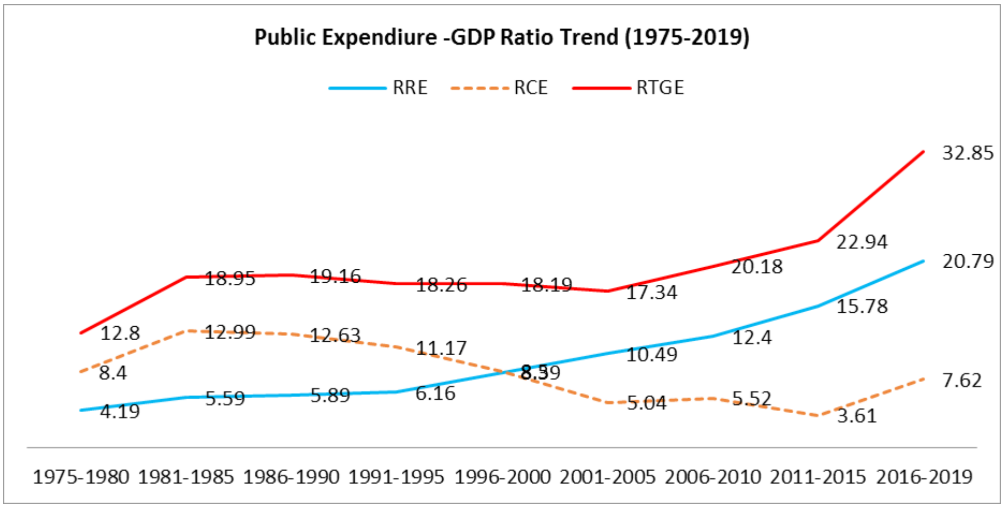

Figure 2 presents trend and pattern of public expenditure-GDP ratio including three categories: recurrent expenditure (RE)-GDP ratio, capital expenditure (CE)–GDP ratio, and total government expenditure (GE)-GDP ratio. In this figure, trend and pattern of these variables per annum time from 1975 to 2019 shows the share of Government expenditure to GDP.

Trend and Pattern Analysis of Public Expenditure (1975-2019) In Different Political Regimes

Share of Public expenditure and Public expenditure-GDP ratio depend on nature and objectives of fiscal and macro-economic policy regimes in the different political regimes. It is expected that the different political regimes and the different political philosophies influence on fiscal and macro-economic policy and then these indicators and their movements. In expansionary fiscal regime, it is a keen concern on what will be impact of the different policy regimes in the different political philosophies on these indicators. Figure 2 illustrates a trend of public expenditure-GDP ratio from 1975 to 2019.

Table 3: Public Expenditure-GDP Ratio

Regime		share of GE(%)			ratio to GDP (%)		
	Year	RE	CE	FE	RE	CE	GE
Panchyat Regime	1975-1980	32.69	65.59	1.72	4.19	8.40	12.80
	1981-1985	29.51	68.56	1.93	5.59	12.99	18.95
	1986-1990	30.76	65.95	3.29	5.89	12.63	19.16
Democracy I: Ceremonial Monarch	1991-1995	33.72	61.18	5.10	6.16	11.17	18.26
	1996-2000	46.12	46.74	7.14	8.39	8.50	18.19
	2001-2005	60.53	29.05	10.43	10.49	5.04	17.34

Democracy II: Federal	2006-2010	61.44	27.37	11.19	12.40	5.52	20.18
	2011-2015	68.81	15.73	15.46	15.78	3.61	22.94
	2016-2019	63.27	23.19	13.53	20.79	7.62	32.85

Table 1 presents trend and pattern of share of total government expenditure including RE, CE and GE and public expenditure-GDP ratio including three categories: recurrent expenditure (RE)-GDP ratio, capital expenditure (CE)–GDP ratio, and total government expenditure (GE)-GDP ratio. In this table, trend and pattern of these variables per annum time from 1975 to 2019 shows in the different regimes: Panchayat (1975-1990), Democracy I (1991-2005) and Democracy II (2006-2019).

Trend of GDP Growth Rate

Despite different political regimes, their common agenda is to expand frontier of GDP outward and ahead with a higher economic growth rate through expansionary fiscal policy regime in the proper tune with narrow budget and fiscal deficit. In the constraint of resource, all regimes adopt expansionary fiscal policy to fuel GDP growth rate over time.

Figure 3: Growth Rate of Real GDP Trend

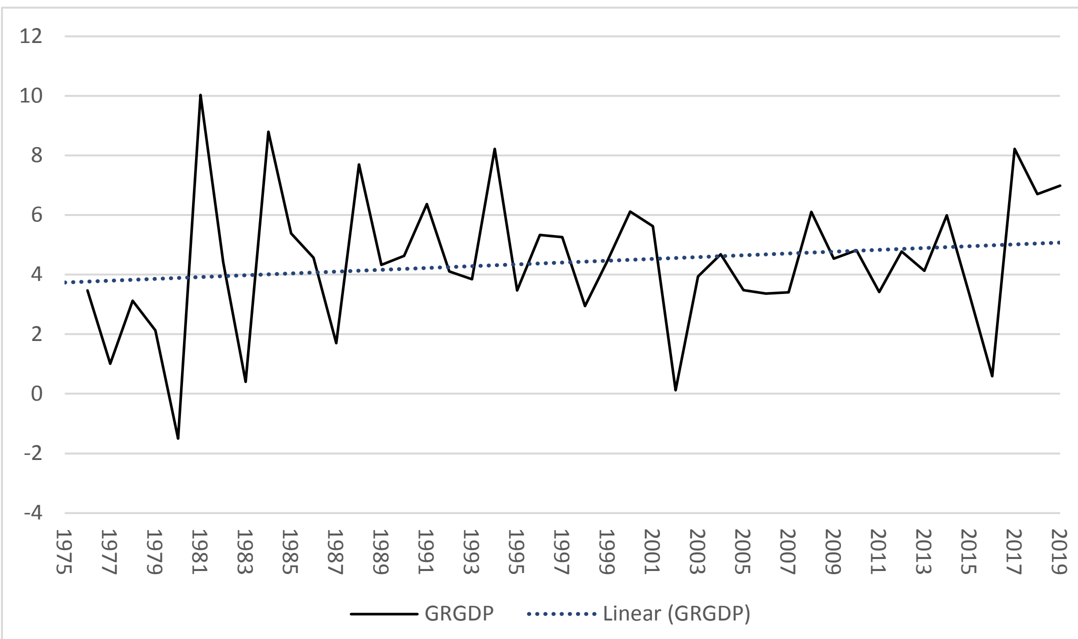

Figure 3 presents growth rate of real GDP from 1975 to 2019. It represents movement, direction and change of growth rate in the three different political regimes: a) Panchayat, b) Democracy I and c) Democracy II.

Result of Correlation among public expenditure variables

Macroeconomic models of the different political regimes concern to give public expenditure shock to achieve economic growth by increasing investment on social-economic infrastructure, along with the growth of output, income and employment. It is expected that higher economic growth is a solution of all socio-economic issues for achieving development, prosperity and welfare of the country. How much institutional mechanism and process are efficient and effective to allocation, mobilization and productive delivery of public expenditure may be a genuine question in Nepal. It determines a productive contribution of incremental public expenditure on economic growth. Table 4 presents the result of correlation of different public expenditure variables with growth rate of real GDP.

Table 4: Results of Correlation

Variables	FE	GE	RE	CE
GE	1			
FE	0.50	1		
RE	0.22	0.88	1	
CE	0.38	-0.19	-0.63	1

Table presents results of correlation between growth rate of real GDP from 1975 to 2019 with recurrent expenditure (RE)-GDP ratio, capital expenditure (CE)–GDP ratio, and total government expenditure (GE)-GDP ratio. It represents the dynamic relationship between these variables over movement, direction and change of growth rate in the three different political regimes: a) Panchayat, b) Democracy I and c) Democracy II.

Result of Trend Line of Share of Public Expenditure and Public Expenditure-GDP ratio

As input of macroeconomic models and of expansionary fiscal policy in the different political regimes, share of public expenditure and public expenditure-GDP ratio move outwards from the frontier aspects. Trend and pattern of these indicators are key concerns to draw relative scenario of public expenditure and growth in these different political regimes. It is expected that trend and pattern of public expenditure and public expenditure-GDP ratio are sufficient to compatible to real economic growth over time. How much deficit financing tool is used as a cost of economic growth and expansionary fiscal policy may be an honest question in Nepal. It determines future direction of public expenditure to economic growth. Figure 4 and 5 presents the result of share of public expenditure and public expenditure-GDP ratio.

Figure 4: Result of Share of Public Expenditure (%) over different political regimes

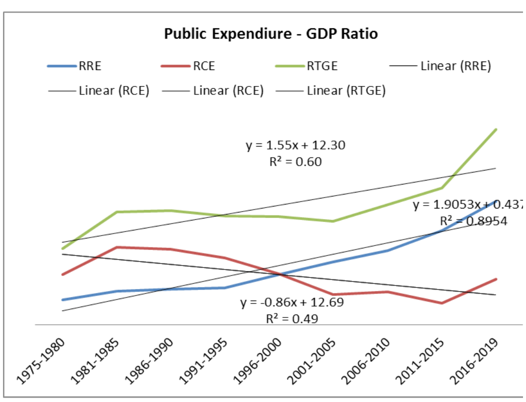

Figure 5: Public Expenditure-GDP ratio Trend

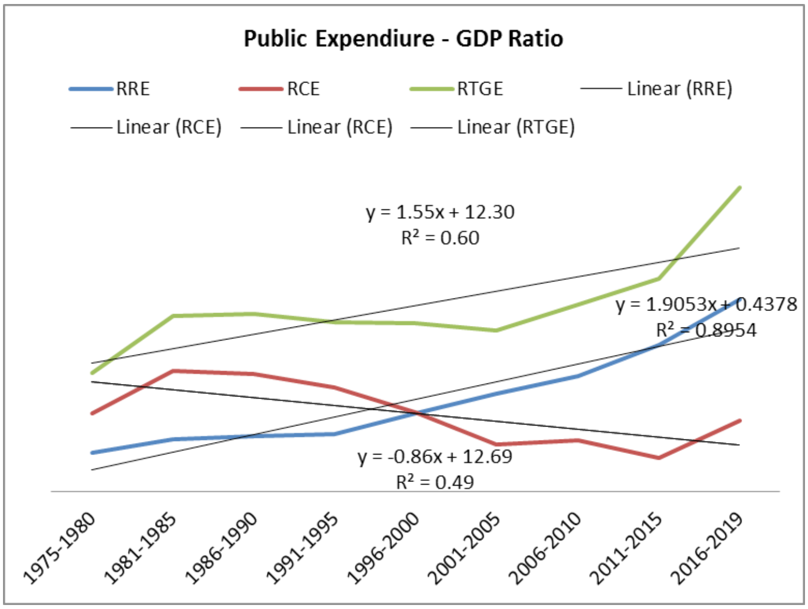

Figure 4 and 5 presents results of trend of recurrent expenditure (RE)-GDP ratio, capital expenditure (CE)–GDP ratio, and total government expenditure (GE)-GDP ratio, along with a trend line of RE, CE and GE. It represents result of linear trend analysis of variables to present their movement, direction and change over time from 1975 to 2019 specifically the three different political regimes: a) Panchayat, b) Democracy I and c) Democracy II.

Discussions

Despite the operational public expenditure framework, budgetary practices are different across the world as per national demand of development. As mentioned in the law of Keynes and Wagner, budgetary practices are expansionary nature and pattern in the most developing countries, like in Nepal.

In budget, there are three public expenditures: government expenditure (GE), recurrent expenditure (RE) and capital expenditure. Since a trend of RE is inclining with positive growth, a trend of GE is also inclining. However, it is different in case of capital expenditure (CE) because of consistent trend. In RE, there are three major factors: a) political reforms and new political and economic institutions, c) inflation induced salary and incentive adjustment, and c) cost of fragility and inefficiency. However, it is different in capital expenditure that is a key driver of development and economic growth should be expansionary. Due to ineffective, inefficient, and poor capable institutions and their mechanisms and functions, non-result oriented budgetary system, and debt financed projects and programs, capital expenditure's trend and pattern are steady. As a consequent, an economic growth's indicator performance is not expected.

In the descriptive statistics from 1975 to 2019, GE-GDP ratio (20.02 %) leads to RE (9.64%), CE (8.18%), and EC (4.43 %) (Table 1). By different political regimes, CE-GE ratio (66.7%) dominates to RE-GE ratio (30.99%) and FE-GE ratio (2.31%) in the Panchayat political regime (1975-1990).

RE-GE ratio and FE-GE ratio's trend incline in democracy period (1991-2005) and federal democracy (2006-2019), like RE-GDP ratio and FE-GDP ratio but CE-GE ratio's trend declines in these periods, like CE-GDP ratio (Table 2). In these indicators, RE and FE are unnecessarily expansionary but CE is unnecessarily contractionary.

Similarly, share of public expenditure trend and public expenditure-GDP ratio's trend are mixed. In the share of public expenditure, RE-GE ratio trend line is positive to 63.27% in 2019 from RE (32.59 %), meanwhile CE-GE ratio trend line is negative to 23.19 % from 65.59% (Figure 1 & 2, and Table 3). It is similar to public expenditure-GDP ratio. Relatively, public expenditure in the Panchayat political regime is better than democracy and federal regime in terms of RE-GE ratio, CE-GE ratio, RE-GDP ratio and CE-GDP ratio. In another words, efficiency of public expenditure in the Panchayat political regime is higher than in democracy and federal regime. Therefore, deficit financing and debt financing are most used in these democratic periods. However, low CE-GE and CE-GDP ratio is being a big challenge in Nepal.

In the result of the correlation, RE is positively correlated with GE and CE is negatively correlated with GE. Similarly, CE is negatively correlated with RE. It shows the expansionary budgetary policy doesn't influence on CE but can be seen in GE and RE.

Furthermore, trend line of RE-GE ratio inclines annually by 5.47 percent, if RE and GE increases annually by 1 percent. R^2 (=0.86) values justify this trend line. Reversely, trend line of CE-GE ratio declines annually by 7.28, if CE and GE inclines annually by 1 percent. R^2 (=0.89) values justify this trend line. In case of GDP, trend line of RE-GDP ratio inclines annually by 1.90 percent, when GE and RE increases annually by 1 percent. R^2 (=0.89) values justify this trend line. Similarly, CE-GDP ratio declines annually by 0.86, when CE and RE increases by 1 percent. R^2 (=0.86) values justify this trend line. Thus, the annual positive change of regular expenditure in the share of public expenditure is higher than in the share of GDP. Whereas, the annual negative change of capital expenditure in the share of public expenditure is higher than in the share of GDP. Thus, uncontrolled expansionary regular expenditure and unnecessarily contractionary capital expenditure are big issues to macro-economic stability and higher economic growth of Nepal.

Conclusion

This study analyzes trend and pattern of public expenditure and relationship with economic growth in Nepal by using descriptive, trend, ratio and correlation method based on secondary data from 1975 to 2019. As a result, a trend of recurrent expenditure (RE) is inclining with positive growth, a trend of government expenditure (GE) is also inclining. However, it is different in case of capital expenditure (CE) because of consistent trend. Secondly, by different political regimes, CE-GE ratio (66.7%) dominates to RE-GE ratio (30.99%) and FE-GE ratio (2.31%) in the Panchayat political regime (1975-1990). RE-GE ratio and FE-GE ratio's trend incline in democracy period (1991-2005) and federal democracy (2006-2019), like RE-GDP ratio and FE-GDP ratio but CE-GE ratio's trend declines in these periods, like CE-GDP ratio (Table 2). In these indicators, RE and FE are unnecessarily expansionary but CE is unnecessarily contractionary. Thirdly, public expenditure in the Panchayat political regime is better than democracy and federal regime in terms of RE-GE ratio, CE-GE ratio, RE-GDP ratio and CE-GDP ratio. Deficit financing and debt financing are most used in these democratic periods. However, low CE-GE and CE-GDP ratio is being a big challenge in Nepal. Fourthly, RE is positively correlated with

GE and CE is negatively correlated with GE. Similarly, CE is negatively correlated with RE. It shows the expansionary budgetary policy doesn't influence on CE but can be seen in GE and RE. Lastly, the annual positive change of regular expenditure in the share of public expenditure is higher than in the share of GDP. Whereas, the annual negative change of capital expenditure in the share of public expenditure is higher than in the share of GDP. Thus, uncontrolled expansionary regular expenditure and unnecessarily contractionary capital expenditure are big issues to macro-economic stability and higher economic growth of Nepal. This paper is expected to contribute to understand public expenditure and its linkage with economic growth and to formulate public expenditure framework.

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