Causality Between Public Expenditure and Economic Growth in Rajasthan

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Public expenditure is an important instrument of fiscal policy. The goal of the public spending is the allocation of scarce means and maximization of welfare. With the passage of time, there has been an increasing trend in public expenditure in developing and developed countries. After World War II, the ratio of public expenditure to GDP has significantly increased in India as in the case of other countries in the world. There exist divergent views points and standpoints on the role of government and its engagement in economic activities. The classical economist proposed little or no government intervention in economic activities of a nation or the role of the state was suggested to be confined to maintenance of law and order. According to classical school of thought, (Smith 1776, Ricardo, 1821) increase in government expenditure would negatively influence the role of private capital. Disagreement with the classical school on state’s initiatives in the economic sphere is that increase in taxation is a disincentive to private capital and deficit financing through tax or other means would reduce the competition among capitalists in the economy. More or less the same was proposition was put forwarded by the predecessors of classical economists, viz., Physiocrats in France or Mercantilist School in England.

In the light of the changing economic environment in India and Rajasthan, particularly after the introduction of economic reforms in India in 1991, the study broadly analyze the trend and pattern of government expenditure and the implications of its changing composition and structure over the years on the state economy of Rajasthan. There has been considerable debate on the issue of the relationship between government expenditure and economic growth. Although many studies have undertaken in the recent past on different aspect of public expenditure, both nationally and internationally, yet not much is available on the state level particularly for Rajasthan state. The present study tries to fill this gap. In addition to analyzing the causality, the study had made attempts to identify the direction of causality between public expenditure and economic growth in
Rajasthan, causality between tax revenue and public expenditure and various factors influencing public expenditure in the state.

**Chapters 1 and 2 – Introduction and Review of Literature**

The question of public expenditure has assumed immense importance in the recent past in India particularly after the introduction of economic reforms in 1991. It has been declared as the avowed policy of every government to curtail deficit financing as it spirals inflation and deflates real earning of the capital of domestic as well as foreign. As deficit financing eventually leads to inflation and erosion of real income, the national government is caught between the situation of reducing inflation on the one side and financing expenditure on the other, through borrowing. The increase in public expenditure is also possible through hikes in direct as well as indirect taxes, which would dissuade private capital from the investment.

In the 19th century Adolf Wagner (1835-1917), a German political economist, propounded, “increasing state activities”. It is known as Wagner’s law or Wagner hypothesis of public expenditure. According to the Wagner Hypothesis, there is a positive relationship between economic growth and public expenditure or in other words, the causality runs from economic growth to government spending. On the contrary, Keynesian School of thought (1936) emphasized the role of government in the economy, especially in the period of economic depression, to supplement effective demand in the crisis or resolve the crisis emerging out of under-consumption or over production. The government has a political, social and economic responsibility of balancing the economy. Although Keynesian view on public expenditure has gained wider currency over the standpoints of classical political economists with respect to the role of the state in the economic activities, Keynes has left unanswered the question of why there is the periodical slowdown in the economy or why does business cycle occur?

The neo-classical economists advanced more or less the same proposition as classical economists on the role of government in the economic sphere. One of the major proponents of the neo-classical school of thoughts, Robert Solow argued that economic
growth and public spending were not significantly related to each other in the long run. According to him, technological change and rate of growth in population determined the performance of the economy. Romar (1986), Lucas (1988), Barro (1990) and Rebelo (1991) supported the growth model proposed by Solow. Barro (1990) upheld the view that the government expenditure should focus on productive sector, which would stimulate economic growth through expenditure on the productive sector. In short, growth in expenditure in the non-productive sector or on welfare measure would leave adverse consequences on its growth performance of any economy. To an extent, the viewpoint is rooted in Malthusian population theory which states that increase in wages or income with the laboring poor make them lazy and cause higher rate of growth in population. However, endogenous growth theory of Solow and other neoclassical economists supported government spending on education, infrastructure, research, and development, which would generate positive externalities and add onto growth stimulants. In the parlance of government in the present era, such standpoints tantamount to the view that capital expenditure is preferred to current expenditure by the state. To an extent, it is a positive deviation from the avowed position of classical economists on the role of the state in the economy. In modern times, the vital idea about the principles of public expenditure is that the government should spend more to accelerate the economic development of the country. In developing countries, governments do increasingly resort to stimulate economic growth and it has resulted in an enormous increase in public expenditure. The theory of state functions has also undergone a total change from the police state to that of the welfare state, which has led to an expansion in state activity. Thus, the modern theory of public expenditure under democratic paradigm makes it clear that no economy can function effectively without accepting the importance of the role of public expenditure and spending on the welfare of its people, particularly for the socially and economically vulnerable sections.

The level of public expenditure influences tax buoyancy as well as government revenue. If the government has resources in dispossess to spend, the level of government expenditure will be augmented and vice versa. According to Franklin Roosevelt, the government would spend a little more than the revenue of the government
like any family but the continuous tendency of spending more than the revenue may not be appropriate for the economy (Amoah and Loloh, 2008). In the literature, there are four hypotheses on the causal relation between government expenditure and revenue. According to the first hypothesis, public revenue causes public expenditure (Friedman, 1982). Buchanan and Wagner (1978) forwarded an alternative explanation for the tax and spend hypothesis and stated that the taxpayer is under a fiscal illusion and the cut in the tax rates would bring down the price of goods and services, which would, in turn, drive up the effective demand in the economy. The second hypothesis is related to the association between tax and expenditure. It is known as the spend-tax hypothesis (Peacock and Wiseman, 1961, 1979). Government spending leads to tax revenue of the government. Barro (1974, 1979, 1986) stated in his tax smoothing hypothesis that the government spending is an exogenous variable, and it increases the tax revenue of the government. The fiscal synchronization hypothesis (Meltzer and Richard, 1981; Musgrave, 1966) states that tax revenue and government expenditure is dependent on each other and there is bidirectional causality between both. The fiscal neutrality hypothesis, on the contrary, proposes that government revenue and expenditure decision are independent to each other (institutional separation hypothesis) and it’s the long run economic growth, which determines the level of public expenditure and rate of taxes in the economy (Baghestani and McNown, 1994).

In the above context, different economic experts give different reasons for enhancement of public expenditure in an economy. According to Hicks (1995), “Rapid expansion of public sector is now universal phenomenon”. Adolf Wagner (1958) has established a functional relationship between industrialization and relative importance of public sector activities. Expansion of public expenditure is in proportion to the growth of the gross national product. This is due to the fact that, the government has to perform a number of functions more efficiently which has led to an intensive growth in public activities thereby increasing public expenditure.

Although Williamson does not directly state about the importance of government intervention in the modern world, his assertion provides the pointer to the fact that rapid industrialization and urbanization warrant augmented role of the government manifested
in terms of its spending. Wagner’s has forwarded three main reasons for the increase in the government’s spending. First, industrialization and modernization lead to the replacement of private sector with the public sector. Second, an increase in real income would lead to an expansion of income elastic “cultural and welfare” expenditures. Wagner cited education and culture are two areas where the government could be a better provider than the private sector. Thus, the public sector would grow in tune with the basic needs of the people and the expenditure pattern of people widens with the expansion of education and other culture needs of the society. Third, natural monopolies such as railroads are needed to taken over by the government because private companies would not deliver efficiently the desired outcome. It is on account of the fact that the private capital would not be in a position to raise required finance for the development of natural monopolies. The importance of public expenditure and reasons for increasing public expenditure stated above reveal that over a period of time, public expenditure in an economy is bound to increase.

Rajasthan is one of the largest states occupying 10.41 percent of the total geographical area and 5.61 percent of the population in India. Rajasthan is predominantly an agricultural economy with 62% of the population engaged in agriculture and allied activities. Rajasthan is a water deficient state with only 1.07 percent of total water resource in the country. The Industrial sector contributed 28.54 percent while the contribution of agriculture was 20.27 percent in the NSDP of the state economy of Rajasthan in 2013-14. The share of service sector in NSDP was 51.19 percent in 2013-14. In the fiscal management, the government of Rajasthan is not significantly different from many other states in India. Notwithstanding a mismatch between government revenue and expenditure, for the last three years, the state has managed to bring down its fiscal deficit well below the target of 3.0 of NSDP as stipulated in the Fiscal Responsibility and Budgetary Management Act (FRBM Act) of 2005. The fiscal deficit of the state economy has been brought down to 1.3 percent of the NSDP in 2012-13. However, it has to be admitted that reduction in fiscal deficit well below the target of FRBM Act considerably curtail space for fiscal maneuverability of the state especially in a time of crisis, which occurs rather intermittently particularly after the introduction of market
integration in 1991. To a great extent, adherence to the stipulations of FRBM Act undermines the role of the government in the sphere of economic activity and it traces its philosophical routings identifies with the statement of Franklin Roosevelt which in turn has its ideological bonding with classical as well as the neo-classical paradigm or free market economy.

There are certain characteristics features of the fiscal management of the government of Rajasthan for the last half a decade. Important among the characteristics are; (i) relative share of wages and salaries in the total revenue receipt of the state has declined from 35 percent to 26.3 percent between 2008-09 and 2012-13; (ii) as percentage of revenue expenditure, share of wages and salaries accounted for 47.3 percent (with annual variations) in 2008-09 and the share has declined to 36.5 percent in 2012-13. It is primarily on account of the fact that wages and salaries increased at a much slower pace as compared to revenue receipt of the state. It is partially attributable to the downsizing of the government. (iii) interest payment on past loans has also declined continuously from 18.6 percent to 12.5 percent and interest payment as percentage of revenue expenditure has declined from 18.2 percent to 13.1 percent between 2008-09 and 2012-13; (iv) fiscal liabilities of the government of Rajasthan as percentage of NSDP has also declined consecutively from 36.4 percent to 25.7 percent during the reference period; (v) Although the relative share of own tax revenue in the total receipt of the state government has remained almost stagnant, the share of state government in central taxes has registered a marginal decline from 27 percent to 25 percent between 2008-09 and 2012-13; (vi) in the total capital expenditure, relative share of loans and advances has substantially increased from 5.44 percent to 18.41 percent during the reference period implying that the interest payment is likely to escalate further leaving profound impact on revenue or current expenditure, which would, in a way, cripple the state government from investing in productive assets from revenue receipt in future; (vii) Relative share of capital expenditure has registered only a marginal increase from 15.39 percent to 17.10 percent during the period under reference here (Government of Rajasthan, 2014). It is not an appreciable trend in the context of the adherence of the state government to stick to the stipulations of FRBM Act of 2005.
Objectives of the Study

1. To analyze the structure, trend and pattern of government expenditure and revenue in Rajasthan for the period 1970-71 to 2013-14;

2. To analyze causal relationship between government expenditure and economic growth (NSDP) in the state of Rajasthan during the reference period of the study;

3. To test the validity of different theories on public expenditure and revenue in Rajasthan.

4. To compare the economic growth and performance of government expenditure and NSDP in the pre and Post Economic-Reform period in Rajasthan.

5. To identify major determinants of public expenditure in Rajasthan.

6. To suggest a public expenditure policy for the state of Rajasthan.

Scope and Significance of the Study

Public expenditure influences economic development and growth of an economy. Government spending is rather crucial in deciding the welfare of a region, particularly for the economically and socially vulnerable sections in the society. Moreover, public expenditure or government spending is a major catalyst force of leveling up economic inequality in a state, as government expenditure is concentrated mostly on social goods like infrastructure development and welfare of the vulnerable sections of the society. Fiscal instruments, particularly tax policies have become an important tool with the state for redistribution of income generated by the existing system of development in the country. Therefore, a direct relation between government expenditure and economic growth and vice versa. In this context, the present study will be confined to the state of Rajasthan for the period of 1970-71 to 2013-14. The choice of the period is influenced mostly by the availability of secondary data on different aspects of public expenditure in the state of Rajasthan and the broad objective of the study is limited to testing the existing and accepted theories on the association between economic growth and public
expenditure. However, the study prefers to deviate from a deductive approach as the empirical analysis explores inductive explanations for the statistically valid relationship in the context of Rajasthan economy.

Chapter 3: Data and Methodology

Hypotheses

H01: There is no causal relationship and unidirectional causality between public expenditure and economic growth in Rajasthan

H11: - There are the causal relationship and unidirectional causality between public expenditure and economic growth in Rajasthan.

H02: There is no causal and unidirectional relationship between economic growth and public expenditure

H12: There are causal and unidirectional relationship and causality between economic growth and the government expenditure.

H03: - There is no causal relationship between tax revenue and public expenditure

H13: - There is causal relationship between tax revenue and public expenditure;

H04: - There is no significant difference in public expenditure in Rajasthan between pre and post economic reform period;

H14: - There is significant difference in public expenditure in Rajasthan between pre and post economic reform period.

H05: - There is no significant association between the size of government spending and different determinants of public expenditure in Rajasthan.

H15: - There is significant association between the size of government spending and different determinants of public expenditure in Rajasthan.
The study used secondary data on government expenditure, revenue, and NSDP at constant prices for the state of Rajasthan. The variables were transformed from current to constant price employing implicit deflated as well as splicing of data to shift base year. Trends in growth rate for different time periods were estimated with the same degree of freedom employing kinked exponential function. Known and advanced statistical tools and econometric modeling were used for analysis. Important statistical tools used were ADF, PP and KPSS tests, Engle-Granger, Johansen cointegration method and ARDL Method to find out the long run co-movement of the variable under study. VAR, VECM, and Toda-Yamamoto Causality tests have been used to analyze the causality between the variables. The study also used the structural break with Known and Unknown Break analysis for government expenditure and economic growth. **Period of the Study:** The period of the study is chosen from 1970-71 to 2013-14.

**Chapter 4: Trend and Pattern of Government Expenditure and Revenue in Rajasthan-1970-71 to 2013-14**

Analysis of government expenditure and revenue of Rajasthan for 1970-71 to 2013-14 showed that there were different phases in the overall movement of different components of capital and revenue expenditure and state’s income. It was observed that both expenditure and revenue of the state of Rajasthan moved in tandem with the macroeconomic scenario of the country at large during the period of the study. Although government expenditure is a broad term, it is composed of different components with varied connotations. From the perspective of political economy, the relative share of expenditure under different heads of accounts are important and it was found that capital expenditure on economic services had been on the decline while social service had been on the rise. It is indicative of the fact the state government’s capacity to generate income from productive activities would fall in the long run. Expenditure on revenue accounts has substantially increased over the years, particularly after the implementation of the fifth Pay commission (2005) in the state. There has been a significant shift in the structure of public debt over the years and the interest payment as the percentage of revenue expenditure has substantially increased accounting for 25% of the total revenue expenditure of the state economy of Rajasthan until the first half of the 2000s. It can,
therefore, be concluded that the expenditure, revenue and public debt of Rajasthan have turned favorable from a growth promotion viewpoint in the first half of 2010. The trend in public debt revealed that there were different phases in its overall movements. However, it is worth mentioning that the phases of debt of government of Rajasthan are closely connected to the same in the government of India. The fall in revenue and reduction in the transfer to state government leads to raise in borrowing by the state government. It is also important to note that the recessionary tendencies at the national level leave its ripples in the state economy too, which in turn means that different phases of public debt in Rajasthan is associated with the performance of the national and state economy.

Chapter 5: Analysis of Causality between Public Expenditure, Economic Growth and Public Revenue in Rajasthan

It was found that there was co-integration or rather co-movements between government expenditure and economic growth measured in terms of NSDP in real terms in Rajasthan during 1970-71 to 2013-14. Different mathematical formulations of Wagner’s Law empirically tested the association between government expenditure and NSDP. Peacock and Wiseman’s versions used government expenditure and NSDP in real price while Gupta’s version used per capita government expenditure and per capita NSDP. Guuffman’s version used government consumption expenditure as a dependent variable and NSDP as an independent variable. Differences in the specifications of dependent and independent variables make generalizations on the association between government expenditure and NSDP rather cumbersome. However, it can be broadly concluded that government expenditure moves in tandem with NSDP in the long run. In other words, there exists a synchronized and co-movement between government expenditure and economic growth in the economy of Rajasthan for the period 1970-71 to 2013-14. Its policy implication is that government intervention plays a crucial role in the performance of the economy, which supports of the Keynesian theory of public expenditure in the state of Rajasthan.
Musgrave & Musgrave and Mann used the ratio of government expenditure to NSDP (in real price) as the dependent variable and NSDP & per capita NSDP as independent variables to test the association between government expenditure and economic growth. Those versions of Wagner’s Law showed that there was no long-run relationship between government expenditure and NSDP or the economic growth in Rajasthan. The theoretical premise of specifying government expenditure as ratio of NSDP lies in the fact that it is not the absolute size of government expenditure per se but government expenditure in relation to the size of NSDP or relative size of government expenditure with respect to the income of the economy, which is more relevant and determine the overall performance of the economy in question. Although the Musgrave and Musgrave and Mann versions of Wagner’s Law are superior in terms of its mathematical formulation as compared to other four variants of Wagner’s Law, analysis of Musgrave and Musgrave and Mann versions showed that there was no long-run relationship between the relative size of government expenditure and per capita NSDP. In other words, government expenditure has no significant influence on the economic performance of Rajasthan. Its policy implication is that even if government expands more, there is no assurance that it would reflect in economic growth or economic growth is not driven by the intervention of the government in economic activity. To an extent, Musgrave and Musgrave and Mann versions do support the economic theory of rolling down the role of the State from economic activity. In other words, the findings support the economic philosophy of the economic reforms in India.

In the association between government expenditure and economic growth, causality matters. Causality implies the cause and effect relationship between government expenditure and economic growth. From a policy perspective, the cause and effect relation assumes special significance. The analysis showed that there was a long run as well as short run causality between government expenditure and NSDP. Further, the causality runs from government expenditure to NSDP in the long run and from NSDP to government expenditure in the short run. Its implication is that economic performance enables the government to expand more in the short run while the government expenditure drives economic growth in the long run. In other words, the economy of
Rajasthan was found following Wagner’s Law (Economic growth is positively associated with public spending) in the short run and the Keynesian theory of public expenditure (Government expenditure drives economic growth) in the long run. The study found that Gupta’s version of Wagner’s Law did not work in the state of Rajasthan as there was no causality between per capita government expenditure and Per capita NSDP both in the long run and short run. In the short run, the association between government expenditure and per capita NSDP showed a different relationship (Guffman’s version). There existed a bi-directional causality between government expenditure and per capita NSDP in the short run while government expenditure influences per capita NSDP in the long run. It amounts to saying that Keynesian theory of public expenditure works in the long run in Rajasthan. There was unidirectional causality from NSDP to government consumption expenditure in the long run while there was no such causality between those two macroeconomic variables in the short run. It shows that Pryor’s version of Wagner’s Law does not work in the economy of Rajasthan in the short run. Conversely, as observed in the case of the relationship, there was no causality between the relative size of government expenditure and economic growth in Rajasthan during the period under study and it can be concluded that Musgrave & Musgrave and Mann versions of Wagner’s Law did not work in Rajasthan. Analysis of unknown break in the regression on government expenditure and NSDP of Rajasthan in different versions of Wagner’s Law showed that there was a common break point in the year 1980. It is indicative of the fact that there was a structural shift in the long run association between government expenditure and NSDP. An important reason for the shift is the substantial hike in capital expenditure in 1980-81 periods. From an abysmally small share of capital expenditure of 19% prior to 1980-81, it has substantially increased to 55% in 1980-81. In the following years too, the capital expenditure of Rajasthan remained high. There is a positive association between economic growth the capital expenditure in Rajasthan. The shift in NSDP and government expenditure took place because of the increase in the share of capital expenditure in 1980-81. Capital expenditure further leads to higher irrigation and more Agriculture growth further supplemented to higher
manufacturing and industrial growth. Capital expenditure on agriculture heads at current prices in 1974-75 was 81 crore and increased to 151 crores in 1980-81.

It was observed that the causality runs from public expenditure to economic growth in Rajasthan in the long run. The findings of the study are in conformity with the Keynesian school of thought government expenditures leads to a higher rate of economic growth. Reasons for the positive association between government expenditure and economic growth are: (i) impact of accelerator and multiplier effect of government expenditure is much higher than the private investment; (ii) government expenditure attracts private investment in the productive sector because capital investment by the state in productive sectors like agriculture and industry attracts small capital or petty commodity producers such as small and marginal farmers, Micro, Small, Medium Enterprises (MSME) to the sector. It is worth mentioning here that there is no causality between government expenditure and economic growth in the short run. It further confirms that government expenditure in the infrastructure sector causes long term growth in the economy. To a great extent, it argues caution against the withdrawal of the state from economic activities. Primarily, government spending on infrastructure leads to higher growth and it could be reasons for the association between government expenditure and economic growth. However, generalization of the observed statistical relationship calls for further detailed analysis on accelerator and multiplier effect of government expenditure and it is outside the purview of the present study.

The association between government expenditure and government revenue was statistically tested. Important conclusions derived from the analysis are: (i) there is a causality from government revenue to government expenditure in the short run as well as in the long run. It means, if the government increases or decreases its revenue, it would lead to a proportionate or corresponding change in government expenditure; (ii) there is no causality from government expenditure to government revenue in the short run as well as in the long run. It implies that even if the government increases its expenditure, it does not ensure a proportionate change in the revenue of the government or tax collection. Analysis of unknown break in the association between tax revenue and government expenditure showed that there was a break in the association between two
variables under consideration in the year 1980. **Its implication is that there could be a structural shift in the long run relationship between government spending and tax revenue by 1980.** There is a co-movement of variables in the long run and the government expenditure caused government revenue in Rajasthan or the causality ran from expenditure to revenue.

The causal relationship between tax revenue and government expenditure is indicative of the theoretical postulate that the increased expenditure will improve the tax buoyancy of the state of Rajasthan through its multiplier effect on economic growth. The finding further confirm the Keynesian theory of government expenditure which harps against the downsizing of the government in economic sphere.

**Chapter 6: Pre and Post Economic Reform Analysis of Government Expenditure and Economic Growth in Rajasthan**

Analysis of pre and post economic reform periods showed that there was the substantial difference in the long run association between government expenditure and economic growth in Rajasthan during the two phases of the study. In the pre-reform phase (1970-71 to 1991-92), there was no cointegration between government expenditure and NSDP of Rajasthan. Its implication is that there had been no long-run equilibrium relationship between government spending and economic growth in the pre-reform phase. However, there was co-movement of variables under consideration in the short run during that period. As per the results of Vector Autoregressive Model (VAR), it was found that there were short run relationships between government expenditure and NSDP in Rajasthan. The statistically observed relationship confirmed that government expenditure positively influenced NSDP of Rajasthan. However, the causation did not run from the NSDP to the government expenditure in the pre-reform period in Rajasthan. It can be concluded that the Keynesian Hypothesis was valid for Rajasthan economy during the pre-reform period (1970-71 to 1991-1992). The association between government expenditure and NSDP turned different during the post-reform period. Conversely, the post-reform analysis of the relationship between government expenditure and NSDP indicated that there was a co-integration
between those two variables in the long run in Rajasthan. It means that there exists a long-run equilibrium relationship between government expenditure and NSDP in Rajasthan during the period 1992-93 to 2013-14. Its implication is that government of Rajasthan should resort to alternative sources of financing public spending rather than the accelerator and multiplier effects tricked up and down from growth momentum generated with NSDP during the period. It was on account of the fact that the government of Rajasthan had given more emphasis to spending rather than its sources of borrowing or financing of spending. On the contrary, government spending was sourced mostly from the accelerator and multiplier effect of economic growth in the post-reform period. The observation is in conformity with the development paradigm of the government of India since the early 1990s.

Analysis of the period into pre-economic reform phase and post-economic reform phase showed that the causality between government expenditure and economic growth in the post economic reform phase (after 1991) as compared to pre-economic reform phase. As part of neo-liberal economic policies, both central and state governments have increased their spending on growth driving infrastructure as compared to the pre-economic reform phase. It could be primary reasons for the observed strength in the association between government expenditure and economic growth in the post-reform phase. Rate of growth in public expenditure in the pre and post economic reform periods indicate that there is a higher growth in government expenditure in the post-reform period although the government spending is discriminatory by sectors in characters.

Chapter 7: Determinants of Public Expenditure in Rajasthan State: A Disaggregate Analysis

Tax revenue is one of the major determinants of government expenditure in the state of Rajasthan while the association between government expenditure and the NSDP is found relatively weak. However, there is a derived relationship between NSDP, tax revenue and government expenditure, which is indicative of the fact that changes in NSDP cause changes in government revenue. It, in turn, leads to changes in government expenditure. Moreover, different components of government expenditure
are directly and positively associated with government tax revenue. There is a positive and significant association between government expenditure, tax revenue and public debt with the current level of government expenditure. It is indicative of the fact that a reduction in tax revenue, which if not supplemented with the commensurate increase in public debt would leave the direct effect on government spending. If government expenditure is financed through borrowing, it may augment government spending in initial years, but pull down the economy’s financial maneuverability in the long run. It is suggestive of the fact that if government expenditure is financed through borrowing, in the next two following years, the accelerator and multiplier effect of the government spending would leave the government with a relatively better growth prospects in the short run, but it would invariably drag the economy down in the long run as revealed by the Impulse Response Function (IRF). Broadly, the analysis indicated that government expenditure is the major indicator of the economic strength of the regional economy of Rajasthan and the findings from the study are in conformity with the Keynesian theory of effective demand and public spending. If the government of Rajasthan wishes to give a tilt to its economic growth, the possible means to expand more on capital as well as revenue expenditure. It could be on account of the failure of the private capital to take a substantial leap forward to be prominent in the sphere of economic activity. In this context, state government should increase the expenditure to develop both productive as well as service sector for the development of the economy of Rajastha. It is on account of the fact that capital expenditure expands income and employment generating capacity of the economy while spending on welfare activities give a boost to effective demand of the economy. In the above analysis, the observed relationship between government expenditure and NSDP prove that the keynsian principle does work in the state of Rajasthan.

Chapter 8: Conclusion & Policy Implications

The present study has undertaken to examine the causality between public expenditure and economic growth further investigated that the causality runs from growth
to public expenditure. This shows that growth is the cause of public expenditure in Rajasthan. The study recommended that the government should increase the expenditure on transportation, infrastructure, education and other social and economic services so that the government expenditure can lead to the growth of the state. Pre and post-reform analysis of the study concluded that pre-reform interventions of the government of Rajasthan were causing growth whereas after reform period public expenditure is not leading the growth. This further indicates the policy formation and implementation were lagging somewhere in Rajasthan after the reform period. Analysis of major determinants of public expenditure was carried to identify and measure the scale and magnitude of each variable on public expenditure.

Most importantly, the study has found that the tax revenue determinant was causing significantly to public expenditure of Rajasthan, indicated that public expenditure is highly contributed by tax revenue sources of Rajasthan. As compare to other states of India, Rajasthan is a low-income state, where increasing taxes for enhancing revenue sources is not a good idea. Therefore, the study recommends re-shuffling the tax system and policy formation for resource generation by which economy can lead to the growth.

To put it in its nutshell, the study proved that government spending was the most powerful fiscal weapon in the armory of the government of Rajasthan to activate the regional economy. To a great extent, deficit financing or enhanced government intervention in economic activity is recommended to give the fresh lease of life to the regional economy of Rajasthan, particularly when the economy is in its recessionary phase. Periodic occurrence of a recession has become the order rather than an exception in the international economy since the early 1990s. India and the state of Rajasthan are not an exception to it. The study recommends more active intervention by the government in economic affairs of the state of Rajasthan as tax revenue is the primary determinant of government expenditure. For the widening and deepening of resource mobilization for government spending, opening up of new spaces for resource mobilization for government expenditure has become the need of the hour. To cut the story short, given the present scenario and very fragile size of private capital,
expanding the activity of the government is recommended to be an important driver of economic growth in Rajasthan.

Policy Implications:

The causality between government expenditure and economic growth clearly indicated that there exist well-defined limitations for the private capital, particularly at the state level to pull up economic growth. On the contrary, government expenditure still holds the key for accelerating economic growth in the state of Rajasthan. An important policy implication emerging from the study is that the private capital expenditure has not yet emerged as an important variable to stimulate growth in the economy. It implies that the government has to find ways to spend more on economic sphere to promote economic growth. Decline in the spending in the primary production sector, especially agriculture has to be corrected to stimulate economic growth in the state for two reasons: (i) it is rather less likely that the agriculture sector would attract private investment without complementary and substantial growth in government spending on the sector; (ii) In a state like Rajasthan, government spending in agriculture assumes special significance because more than 70% of the rural households depend on agriculture for their livelihood. Given the financial constraints to channel large funds into the development activities, government has to explore newer and fresher avenues of tax collection which could be possible only from the booming sectors like real estate, health and education. Resorting to traditional material production sectors like agriculture and allied sector, manufacturing and mining and quarrying do not suggest a prudent decision especially in the light of looming large intermittent economic crisis which is again linked to the ups and down in the international market.