Review of Literature

The literature on Public expenditure and its association with different macro-economic variables in India and other countries have been classified into different groups based on the nature of relationships hypothesized in different theories of public spending. Accordingly, the chapter is divided into five sections. The first section discusses the major theoretical strands on public expenditure followed by studies on Indian economy and in different states in Section 2. In Section 3, similar studies in other countries have been extensively and critically reviewed to place the present study in the right perspective. Section 4, Reviewed the studies which have been rejected the Wagner’s Law and Keynesian Hypothesis of Public expenditure. Section 5 includes the studies on tax revenue and government expenditure. In Section 6, studies on determinants of public expenditure and Section 7 includes theoretical gaps in the literature have been identified and discusses the theoretical framework for the study along with research questions.

Section 1

2.1. Theoretical Framework of Public Expenditure and Economic Growth

Public expenditure or Government expenditure is often discussed as part of public economics and public finance. In the modern economic literature, public finance is often used as synonymous with government finance or in opposition to market economics. Until the emergence of Keynesian economics in the 1930s, the ideology of spending the minimum by the state or in other words,
Smithies concept of government’s minimal state’s intervention in the sphere of the economics of the country ruled the roots. After the introduction of the Keynesianism in the 1930s, the area of public expenditure has received wider currency from politicians, and policy makers and was intellectually supported by academics all over the World, particularly in West Europe and Asia. Conventional thinking prevailed until the Great Depression in 1930 was that government should focus on non-economic activities and was thrust on the political philosophy of classical economists. Adam smith preached that the government activities should confine mainly in four functions, viz., (i) protect the society from violence and invasion; (ii) ensure justice to all; (iii) undertake public works and build up institutions for the benefits of civil society at large; and (iv) maintain law and order (Adam H.C., 1898). Although smith envisaged a welfare state, expenditure for the government to provide solace to vulnerable sections of the society was beyond his purview of thoughts. In effect, the classical school of thoughts envisaged that public expenditure was a waste of scare resources of the country.

The Neo-classical school approached public expenditure based on the philosophy of marginal utility principle. According to them, social welfare can be maximized by allocating resources in such a way that it would maximize utility derived from the use of every additional unit of resources. However, the view of the new utilitarian school, particularly of Dalton argued that the government’s tax on the income of rich could be increased and transferred the same to the poor to improve their living conditions. However, the Neo-classical school was criticized on the issue related to the very characteristics and measurability problems of utility principle in public finance.

2.1.1. The Keynesian approach of public expenditure

In the period between 1890 and 1914, public finance or governments’ expenditure attracted the wide attention of economists due to the phenomenal
increase in the level of public expenditure caused by cross boarder wars. The main reason behind the growth of public expenditure was the increasing cost of discharging duties and responsibilities of modern states in a democratic system. Before the release of General Theory of Employment, Interest and Money, the theory of public expenditure was based on certain canons viz; Canon of Economy, Canon of Benefit, Canon of Surplus and Canon of Sanction (Smith, 1776). Keynes criticized the conventional thinking of public finance and recommended full employment as the sole motto or the primary responsibility of the modern democratic governments. Keynes propounded the theory of the public expenditure, which is also known as the Theory of the Public Investment or General Theory of Keynes. The Keynesian theory was successful to overcome the adverse effect of the great depression of the 1930s. The general theory of public expenditure suggested that public expenditure was the balancing act by which the equilibrium in the economy can be achieved. The Keynesian theory of public expenditure explained that if there was an imbalance in the economy (imbalance between investment and saving) and it may lead to recession. Such a situation can be controlled by increasing the level of public expenditure. Public expenditure can be increased by taxing the rich, which would in turn, ensure a redistribution of income and wealth in the society. According to Keynes, as income increases, rate of saving too increases more than proportionately leading to a decline in the marginal propensity to consume and reducing effective demand in the economy. The decline in effective demand or increase in under consumption would lead to economic slowdown and add onto unemployment. Keynes therefore suggested that the gap between the production and consumption should be reduced by increasing effective demand through public expenditure. In effect, Keynes did put upside down the concept of the role of the state of Classical economists and mainstream thoughts until the early part of the 20th century.
Keynesian theory was severely criticized on several grounds. Ragnar Nurkse criticized the Keynesian theory of government intervention by stating that, “Keynesian General Theory has a bias against saving and in favor of spending”. Further, the Keynesian theory of investment was not advisable for the economies in the early stage of their economic development. Schumpeter criticized Keynes’ theory on the ground that it was not a workable proposition. In the words of Schumpeter, “Practical Keynesianism is a seedling which cannot be transplanted into foreign soil; it dies there and become poisonous before it dies…..left the English soil, this seedling is a healthy thing and promises both fruit and shade…… All this applies to every bit of advice that Keynes ever offered. On the contrary, Fellner supported Keynesian theory of public expenditure with the statement, “I will add that in my opinion cyclical Keynesianism has survived these twenty years and will continue to be an influential doctrine in the predictable future.

2.1.2. Post Keynesianism and Public expenditure

Keynes view on government spending has given birth to voluminous literature and further changed the very concept of the role of government in economic sphere of nations, particularly in third world countries. The Classical view of the role of governments was rejected with modifications on Keynesian thoughts by Hansen, Schumpeter, Joan Robinson and Harrod-Domar among others. Hansen (also known as American Keynes) criticized the classical view of the balanced budget and replaced it with the concept of flexible budget.

1 (Dalton. Huge, n.17, P.226).


3 ( Keynes J. M. the general theory of employment interest and money, Macmillan, New York. 1966. P.23)
According to Hansen, taxes and expenditure should be set in such a way that it would promote investment and increase consumption, which would absorb more labour and the problem of unemployment, will be resolved (Keynes, 1936: 313). Beveridge argued that elimination of poverty and provision for full employment should be objectives of any democratic government in the modern world. Lerner too did support the Keynesian view of government expenditure and argued for full employment. Harrod-Domar argued for fiscal neutrality and progressive equilibrium. He envisaged two important roles of fiscal policy: (i) maintain financial stability; and (ii) generate productive capacity in the economy to attain higher economic growth. Stabilization of the economy aimed at ensuring equality between planned saving and investment. Musgrave supported the view points of the Harrod-Domer by stating that the objective of any economy should be the maximization of economic growth with higher income and stable prices\(^4\).

The issue of public expenditure has been discussed widely in economic literature. Most of the studies are related to testing of the hypothesis for Wagner’s law or its different versions in the context of India and other countries. Wagner’s law says that there is causality as well as a uni-direction relationship between economic growth and public expenditure in a country. On the contrary, Keynesian view on public expenditure states that there is uni-directional relationship between government expenditure and economic growth. There exists plethora of literature on different facets of public expenditure. There exists a vast body of empirical literature relating public

expenditure and role of government in promoting economic growth and ensuring welfare for different sections of the society.

Empirical studies on public expenditure can be broadly classified into three major groups, viz;

(i) Studies on public expenditure and economic growth;

(ii) Taxation and government expenditure; and

(iii) Determinants of public expenditure.

The empirical literature on public spending and economic growth can again be classed under two sub-heads, (i) Studies related to India; (ii) Studies in other countries. It is stated at the outset that studies on public expenditure on Indian economy is rather scarce and it is really scanty for states in India. Important studies on India are critically reviewed below.

Section 2

2.2. Studies on Wagner’s Law and Keynesian Theory of Public Expenditure and Economic Growth in India

Reddy (1970) examined the secular trend of public expenditure in India for the period from 1872 to 1968. He concluded that the public expenditure moved in a step by step manner over the years in response to social upheavals and natural calamities, which break the linear trend in expenditure. It is in conformity with the Displace Effect theory of public expenditure and further proved that Wagner’s Law was valid in Indian context. It meant that economic growth moved in tandem with public expenditure in India. Singh and Sahni (1984) analyzed the causality between national income and public expenditure in India for three decades from (1950-1981). The study observed a feedback
relationship between public expenditure and economic growth in India. The feedback relationship was defined as a causality that worked from both sides indicating that economic growth led to public expenditure and vice versa. It means the causality is bi-directional and therefore both Keynesian and Wagner’s law on public expenditure were found invalid in the Indian context. Sahoo (2001) used time series data from 1970-71 to 1998-1999 to test the validity of Wagner hypothesis in India. The study revealed that there was a feedback relationship between public expenditure and economic growth or bi-directional causality between public expenditure and economic growth. In other words, Sahoo’s study indicated no evidence for both the Keynesian and Wagner’s hypothesis in Indian scenario. Saiyed (2012) examined bi-directional causal relationship between economic growth and public expenditure for 1992 to 2012. Using cross-sectional annual data, the study estimated the relationship between national income and public expenditure. The results indicated a significant and bi-directional causal relationship between public expenditure and economic growth. Ray and Ray (2012) investigated the association between government expenditure and economic growth in India for the period 1961-62 to 2009-10. It was found that there existed causality between economic growth and development expenditure or there was a long run relationship between economic growth and development expenditure while there was no such short run causality between economic growth and development expenditure. Srinivasan (2013) tested the causal relationship between public expenditure and economic growth in India with the use of co-integration and error correction model for the period 1973 to 2012. The study showed a long run relationship between public expenditure and economic growth in India. There was a one way causality from economic growth to public expenditure both in the short as well as in the long run and therefore concluded that the Indian economy followed Wagner’s law of public expenditure. Khundrakpam (2013) study on the dynamic interaction between national income and public sector expenditure in India for 1960 to 1997
showed that the causality ran from public expenditure to national income in
India. The findings showed that there was a positive impact of public sector
expenditure on national income up to a level beyond which the impact turned
negative. The study suggested, therefore, that there was the need for
maintaining a proper balance between public expenditure and investment for
economic growth in the long run. Verma and Arora (2010) tested Wagner law
for 1950-51 to 2007-08. The study used two structural breaks: one for the
period of initial phase in economic liberalization and other for the period of
intensive liberalization. The study tested for different versions of Wagner law
to understand elasticity of public expenditure with respect to economic growth.
The results revealed that Wagner law existed in pre as well as post reforms
periods in Indian Economy. Tiwari and Shahbaz (2011) examined the impact
of defense spending on economic growth in India. The study used Zivot and
Andrews (1992) and Lee and Strazicich (2003) structural unit root test and
ADRL bounds test for the testing of their hypothesis. The results of the
empirical analysis showed that there existed long run relationship between
defense spending and economic growth in India. It was also observed that there
was a bi-directional causality between defense spending and economic
growth. Ahmad Masroor (2014) examined the validity of Wagner law for
Indian economy with the use of Engle-Granger and Engle Yoo Cointegration
test. The study pointed out that there is uni-directional causality from GDP to
Expenditure, i.e. the Indian economy moved in conformity with Wagner’s law.
Marjit, Joydeh & Ritwik, analysed the structure and composition of government
expenditure and its impact on economic growth in India. The study was based
on panel data. The study showed that revenue expenditure had negative effect
on economic growth in India whereas the capital expenditure had positive and
significant impact on economic growth.

The studies on different states in India are scanty. Important studies on
the association between economic growth and government spending have
focused mostly on the direction of causality between economic growth and government expenditure. The causality between government spending and national income for different states in India for the period 1969 to 1990 revealed that there existed casualty (Bhat et. al 1991). Employing Sims and Granger causality and multiple Rank ‘F’ test, Bhat et al found that that causality existed and worked for states in India. Another study on the causality between government expenditure in the health sector and economic growth showed that the response of health sector to change in Net State Domestic Product is elastic Bhat and Jain (2004). There was a positive association between spending on social sectors and NSDP of state governments (Allen Roy et al, 2000). Bansal and Budhedeo (2012) tested Wagner’s Law for 29 states in India. The study concluded that the association between economic growth in states and its public expenditure did not support Wagner’s hypothesis. Vats D (2014) observed that economic performance of Haryana had driven up public expenditure without affecting the future sustainability of the state. Haryana state performed better in terms of increasing its development expenditure. The study recommended a higher share in capital expenditure for improving the quality of education and health in the state of Haryana. From a policy perspective, empirical studies on the determinants of public expenditure are rather important at the national as well as sub-national level in a federal country like where accessibility to resource base does vary significantly across states. However, there exists dearth of studies on determinants of public expenditure in India and the present study is intended to fill the spot in the case of the state of Rajasthan.

Section 3

2.3. Studies on Other Countries

Studies on the association between government expenditure and economic growth or economic growth and government expenditure can further be
classified into two broad groups; (i) Studies accepting the hypothesis of Keynes and variants of Wagner’s Law; (ii) Studies rejecting the hypothesis of Wagner’s Law. Enweze (1973) studied the trends in public expenditure of 15 developing countries for a period of ten years and found that mean elasticity of government expenditure on administration, defense and education with respect to per capita is higher as compared to the elasticity of expenditure on other items. Lai and Hsieh (1994) employed a multivariate time series analysis along with vector auto regressive (VAR) model to examine the association between government expenditure and economic growth in G-7 countries. The study found that the relationship between government expenditure and economic growth differ by time within as well as across developed countries. In a sense, Wagner’s hypothesis is proved and the study concluded that there is no evidence to infer that government expenditure can increase economic growth and therefore Keynesian hypothesis is rejected. Diamond (1989) used Dennison growth model to examine the relationship between government expenditure and economic growth in both developed and developing countries. It was observed that investment on infrastructure is the major contributor to economic growth in developed as well as developing countries. Zain (1998) used demand for money(M1) as a proxy for economic activities and found that government expenditure increased demand for money in the Saudi Arabia during 1971-98. Ghali (1998) employed multivariate co-integration techniques to analyze the relationship between public expenditure and economic growth in OECD countries. Government expenditure was used as a proxy to represent the size of the government and found that the size of the government was positively related to economic growth, investment and international trade. Jackson, Fethi and Fethi (1999) analyzed the causal relationship between government expenditure and national income for Northern Cyprus economy for 1977 to 1996. The study found a unidirectional causality between government expenditure and national income which is indicative of the existence of Keynesian hypothesis of public expenditure in the Cyprus
economy. Al-Faris (2002) analysis of annual data on public expenditure and economic growth in Gulf Cooperation Council Countries (GCC), viz., Saudi Arabia, the united Arabia Emirates, Kuwait, Oman, Behran and Quatar from 1970 – 1977. The dynamic relationship between expenditure and economic growth in Gulf Countries was found in conformity with the Wagner’s law. The real GDP and public expenditure showed a long run relationship in all the GCC countries. Further national income was found to have a predictive power to decide on government expenditure or it indicated the validity of Wagner’s hypothesis. Chang (2002) examined Wagner’s law for three emerging industrialized countries and three advanced countries and found that Wagner’s law was valid in five out of six sample nations. Fan et al. (2004) estimated the effects of different types of government expenditure on agriculture growth and rural poverty with district-level data in Uganda. The study found that government expenditure on agricultural research and extension has positive impact on agriculture production (growth). Government expenditure on rural roads also has positive impact on rural poverty reduction. In a different way, the findings supported Keynesian approach to public spending. Rati Ram (1986) empirically examined the causal relationship between public expenditure and national income in 63 countries for the period from 1950 to 1980. The study used Granger Causality test and structural change to analyse the impact of oil shock of 1973 on public expenditure. It was reported that there was a causal relation between public expenditure and economic growth and the direction of the causality varied from country to country depending on socio-economic and political milieu in each country. Oyinlala and Akinnibosun (2013), analyzed the relationship between public expenditure and economic growth in Nigeria for the period from 1970-2009. Using Gregory-Hansen structural breaks co-integration technique, the study found a positive relationship between economic growth and a set of variables such as recurrent expenditure, administrative and transfer expenditures. Conversely, economic growth and capital expenditure are positively related. Results indicated that
Wagner’s law was valid in two models while Wagner’s hypothesis was rejected in three models. Tripathy (1985) examined the association between public expenditure and economic growth in developing countries. It was found that capital expenditure, especially on infrastructure, had positively contributed to economic growth whereas revenue expenditure (expenditure on administrative services) had an inverse association with economic growth. Kuhar et al (2005) examined the impact of public expenditure on economic growth in Slovenia. It was observed that government expenditure has significantly contributed to the overall growth performance of the economy. Employing a bi-variate and tri-variate error correction model within a Granger causality Framework John and George (2005) found that relative size of government measured in terms of government expenditure (i.e. the share of total expenditure in GNP) drives rate of economic growth in UK and Ireland both in the short run as well as in the long run. It could also be observed that economic growth causes relative size of government in Greece. The study also observed that when the inflation rate was added as additional explanatory variable in the model, the causality of UK and Ireland in the short run as well as in the long run was found inverse as compared to the previous model when the inflation rate was not included in the model. Tilak (2006) expenditure on education in Rajasthan and Andhra-Pradesh, the study analyzed allocation of resources, sources of funds for elementary education, changing Centre state responsibilities in financing education, the contribution of external aid to education and the magnitude of the household expenditure. The study revealed that the performance of Rajasthan was much better than the Andhra Pradesh. The study stated that if that situation continued, Andhra Pradesh may replace Rajasthan in the category of BIMARU State. The study concluded that sustained level of expenditure on education was necessary for educational development.
Olugbenga and Owoye (2007) made an attempt to analyze the dynamic nexus between government expenditure and economic growth for a group of 30 OECD countries. The study was based on the annual data from period 1970 to 2005. The study used the cointegration and Granger causality framework of time series econometric analysis to find the link between total government expenditure (TGE) and gross domestic product (GDP). The empirical results of the study discovered the existence of a long-run relationship between government expenditure and economic growth. Furthermore the research study also revealed a unidirectional causality from government expenditure to growth for only 16 countries which implied that these economies have the evidence in supports of the Keynesian hypothesis. While out of 30 countries the 10 countries were found with the causality from economic growth to government expenditure i.e. the existence of Wagner’s law. The study observed that remaining four countries have the evidence of a bi-causal relationship between government expenditure and economic growth. Bose et al. (2007) conducted a panel study of 30 developing countries for period of 1970 to 1980. The results of the study indicate that the share of government capital expenditure in GDP is positively and significantly associated with growth whereas the current expenditure is insignificant. The government expenditure on education and total expenditure on education are significantly associated with economic growth. Sideris (2007) examined the validity of Wagner law in Greece using the time series data from 1833 to 1938. The study used the various time series techniques to analyze the hypothesis of Wagner law of increasing states activities. The result of the empirical analysis states the existence of long run relationship between government expenditure and economic growth. The findings of the causality analysis confirmed that causality runs from national income to government expenditure. Liutang and Zou (2006) carried out with the theoretical model of linking the growth rate of the economy to government expenditure. The study found that government spending could positively or negatively influence economic growth. The
findings of the study were: (i) growth rate of current expenditure is positively and significantly related to rate of growth in output while the growth in capital expenditure has no significant relationship with output growth; (ii) growth rate in public expenditure on general services is negatively influence output growth; (iii) growth rates in expenditure on defense, education, human welfare and economic services do positively influence economic performance. (iv) Government expenditure on transportation and communication is not significantly correlated with output growth while inter-temporal difference in the elasticity of consumption with respect to the government expenditure on transport and communication is positively correlated with the output growth.

To a great extent, the study supports the Keynesian hypothesis. Karpetis (2006) made an attempt to develop a simple dynamic Keynesian model employing multiplier and accelerator to examine the impact of changes in the level of government expenditure on money supply and it was found that inflation in the long run is, to a great extent, a function of government spending and money supply. Omoke (2009) studied the direction of causality between Government expenditure (GE) and National Income (NI) in Nigeria for 35 years from 1970 to 2005. It was found that there was no long-run relationship between government expenditure and growth in national income in Nigeria. However there was causality from government expenditure to growth in national income. Cooray (2009) analysed the effects of government spending on economic growth in 71 countries. The study inferred that both government spending and good governance has positive impact on economic growth. The study indicated that there was a positive relationship between good governance and government spending. Mohammad et al (2009) studied on long-run relationship between M2 (Supply of Money), Inflation, government expenditure and economic growth for Pakistan. The study covered the period from 1977 to 2007. The public expenditure and inflation are negatively related with economic growth whereas the M2 is positively related with economic growth. Jayome Jr et al (2009) identified the impacts of public
spending on transportation, infrastructure and economic performance in Brazili

Samudram, Nair and Vaithilingam (2009) studied the Keynesian and Wagner’s hypothesis in Malaysia (1970-2004). The study found a long run relationship between total expenditure and GNP. Sinha (1998) explained the relationship between government expenditure and GDP in China during 1960-92. There was a strong relationship between government expenditure and GDP. The study rejected Wagner’s hypothesis but accepted Keynesian hypothesis. Alam, Sultana and Butt (2010) examined the relationship between social expenditure and economic growth in Bangladesh, India, Indonesia, Korea, Malaysia, Pakistan, Philippines, Singapore, Sri Lanka and Thailand. It was revealed a long run dynamic relationship between expenditures on education, health, social security and economic growth. Abdullab and Maamor (2010) tested Wagner’s hypothesis in Malaysia. There was a long run significant and positive relationship between national income and government development expenditure. The study concluded Wagnerian hypothesis was proved operating in the context of Malaysia. Jamshaid et al. (2010) analyzed the nature and the direction of causality between public expenditure and national income in Pakistan with development expenditures (DE), administration expenditures (AE), debt services (DS) and defense services (DF). The study applied the Toda-Yamamoto causality test to analyze the data from 1971 to 2006. It was concluded that there was a unidirectional causality between from gross domestic product (GDP) to government expenditure or the study proved Wagner’s Law. Nurudeen and Usman (2010) analyzed the impact of government expenditure on economic growth in Nigeria for 38 years. The capital expenditure, current expenditure and expenditure on education exerted adversely impacted on economic growth whereas the expenditure on the transport, communication and health had positive impact on economic growth. Dandan (2011) examined the impact of public expenditure on economic
growth in Jordan from 1990 to 2006. The study confirmed that the government expenditure has positive influence on economic growth implying that the Keynesian hypothesis was proved in the context of Jordan economy. Sever et al (2011) analyzed the relationship between government spending and its impact on economic growth in Croatia. The structure of government expenditure is an important variable influencing economic growth. Taiwo & Abayomi (2011) dovetailed the trend and impact of government expenditure on the growth rates of real GDP for 1970-2008 in Nigeria. The study showed that there existed a positive relationship between real GDP and current and capital expenditure. Akpan (2011) tested the validity of Wagner’s Law of causal relationship between public expenditure and national income in Nigeria for the period of 1970 to 2008. The study showed strong support for Wagner’s long run causal relationship between both the variables. The study also confirmed the short run causal relationship between public expenditure and economic growth. Ele et al. (2014) examined the impact of capital expenditure on agricultural growth in Nigeria from 1961 to 2010. The study revealed that there was a long-run relationship between capital expenditure on agriculture and its growth performance. Also, there was a unidirectional relationship between capital expenditure and agricultural growth. Another study on Nigeria observed a unidirectional causality from government expenditure to economic growth or the Keynesian hypothesis was proved (Sevitenyi, 2012). Cosimo Magazzino (2012) tested all six functional forms of Wagner’s law in 27 European Union countries for 1970-2007 dividing 27 nations into a binary of rich and poor. The study found evidences in support of Wagnerian hypothesis in rich countries whereas Keynesian hypothesis was rejected. Gurgul, Lach and Mestel (2012) explored the association between budgeted expenditure and economic growth in Poland. The study used expenditure data at aggregate as well as disaggregated level on health, social services, education, defense, public security and administration. A direct and positive association could be observed between government expenditure and economic
growth in Poland or in other words Keynesian theory was proved. Anwer, Rafique and Joiya (2012) tested the impact of defense spending on economic growth in Pakistan for 30 years from 1980 to 2010. The study confirmed the findings of Khan (2004) that the government spending on defense had not had any significant influence on economic growth in Pakistan and, therefore, defense expenditure could not be a macroeconomic stabilizer. Ibrahem Mohamed Al Bataineh (2012) analyzed the influence of public expenditures on economic growth for the period 1990 to 2010. Government expenditure has positive impact on the growth of GDP or in other words the study found the evidence in support of the Keynesian theory of public expenditure. Tepus (2012) examined the dynamic interaction between government spending and economic growth in Romania during 2000 to 2010 and the Wagner hypothesis was operative in Romania. Olabisi and Aloni (2012) analyzed the effects of government expenditure on economic growth in Nigerian economy from 1960 to 2008. The study assumed that government expenditure could be catalyst to offset the negative impact of market failures on the economy and it was concluded that expenditure on agriculture and transportation positively and significantly influenced the economic growth. Pradhan and Bagchi (2012) accessed the causality between government expenditure, gross domestic product and exports for seven SAARC countries from 1960 to 2010. There was a bidirectional causality between exports and economic growth in India, whereas the unidirectional relationship between export and economic growth in Maldives, Pakistan, Bangladesh and Nepal. Further, the unidirectional causality could be observed between government expenditure and economic growth in Bangladesh and Maldives while Pakistan and Bhutan reported opposite relationship in the variable, i.e., economic growth to government expenditure. Government expenditure caused changes in the value of exports in Maldives and Sri Lanka. Conversely, export led to change in government expenditure in Pakistan. Ifeangi Desmond et. Al (2012) tested the hypothesis of government expenditure on economic growth in Nigeria for 1970-2009 and
found that the relationship existed between public expenditure and economic growth. However, it was also reported that government expenditure on different components had varied impact on economic growth. Mudkai and Masaviru (2012) analyzed the impact of public expenditure on education, health, economic affairs, defense, agriculture, transport and communication on economic growth in Kenya for 1970-2008. The study found that the expenditure on education had significant effect on economic growth whereas the expenditure on economic affairs, transport and communication less significant impact economic growth. Chude and Chude (2013) analyzed the impact of public expenditure on education on economic growth in Nigeria for 35 years and observed that that total expenditure on education had significant and positive relationship with economic growth in the long run. Dada and Adewale (2013) study found that Wagner's Law was a reality in Nigeria from the period 1961 - 2011. The study examined the long-run association and direction of causality between economic growth and government spending. Nkiru Patrici et al (2013) analyzed the association between public expenditure on education and economic growth in Nigeria during 1977 to 2012. It was observed that expenditure on education was positively and significantly associated with economic growth in Nigeria in the long run. Egunjobi (2013) explored the impact of public consumption, private investment, public investment and total government expenditure on economic growth from 1977 to 2008. The study confirmed that the private and public investment had positive impacts on economic growth whereas government expenditure on public consumption had negative impacts on economic growth. Attari and Javed (2013) found a positive relationship between government expenditure and economic growth in Pakistan for 1980-2010. The study indicated that the government expenditure had positive externalities and linkages. Egbetunde and fasanya (2013) studied the impact of public expenditure on economic growth in Nigeria for 40 years and observed a negative association between the two variables. Jegede (2013) examined the causality between government
expenditure and economic growth in Nigeria for 1998-09 and concluded that government expenditure led to economic growth. Ageli (2013) analyzes the validity of different versions of Wagner’s hypothesis in Saudi Arabia with 42 years data and found that Wagner’s Law and its variants were valid for the economy of Saudi Arabia. Njuru et al (2014) tested the hypothesis that government expenditure had a positive impact on private investment in Kenya during 1963-12. The study found that both current expenditure and development expenditure drove up private investment. Ridzuan et al (2014) tested the validity of Keynesian and Wagnerian law in Malaysia. The study accepted Keynesian as well as Wagnerian law for the Malaysian economy. Further, the study proved that change in expenditure on consumption left direct impact on economic growth in the Malaysian economy. Lukman, Serifat and Owolabi (2015) employed autoregressive distributed lag model to test the relationship between government expenditure and economic growth in Nigeria with the use of annual time series data for 41 years. The study found that current and capital expenditure has significant and positive impact on gross domestic product. Sulku and Cancer (2011) observed that the relationship of per capita Gross Domestic Product (GDP), per capita health expenditures and population growth in Turkey during 1984 to 2006 expenditure on health lagged behind income growth. Lamartina and Zaghini (2008) employing a panel cointegration analysis to test the Wagner law in 23 OECD countries for 1970 to 2006 and proved a long run positive relation between government expenditure and economic growth in 23 OECD countries.

Section 4

2.4. Literature on Wagnerian and Keynesian Hypothesis Rejected

Afxentiou and Serleties (1996) used the Sims and Granger causality model to test the causality between government expenditure and GDP in Canada for 1947-86 periods. It was found that Wagner’s law of public expenditure did not
hold well in Canadian economy. Richard E Wagner and Warren E Weber (1977) examined the validity of Wagner’s law in 34 countries for 32 years and found no significant and positive relationship between public expenditure and economic growth. Daniel Landau (1983) studied the relationship between government consumption expenditure and real per capita gross national product in 104 countries for the period from 1960 to 1977. The study revealed that there existed a negative relationship between government consumption expenditure and per capita gross domestic product. Nah (1997) employed Spearman Rank Correlation to test the co-movement of expenditures on social sector and economic growth for 68 countries in 1992. It was observed that advanced countries spent relatively more on health and social security while developing countries spent more on education. However, the study did not arrive at conclusive evidence on either of the theories of public expenditure and economic growth. Ashanet. al (1989) investigated the causal relationship between government expenditure and national income in 24 OECD countries and found a bi-directional causality between government expenditure and income growth. In other words, the findings of the study rejected the theoretical proposition of both Keynes as well as Wagner’s. Ahmad and Ahmad (2005) tested the long run relationship between government size and per capita income for 8 countries. The study did not find any evidence of long run relationship between government size and per capita income. The short-run Granger Causality analysis showed that Iran had bi-directional short run causality between government size and per capita income while other countries did not show any evidence of relationship between public expenditure and economic growth. Huang (2006) used the bound test and Toda-Yamamoto’s Granger Non-Causality test to check the Wagner’s law for China and Taiwan for 1979 to 2002. The finding showed that there existed no long run relationship between government size and the economy in both the countries. The results of Toda-Yamamoto’s Causality test indicated that Wagner’s law did not exist for China and Taiwan. Rehmanlqbal and Siddiqi (2010) examined
the nexus between government spending and economic growth for Pakistan from 1971 to 2006. The study confirmed that there was no impact of government spending on economic growth and therefore Wagner’s hypothesis was rejected. Rauf et al (2012) analyzed the applicability of Wagner law for Pakistan from 1979 to 2009. The study utilized the autoregressive distributed lag model and Toda-Yamamoto approach to find out the direction of causality between national income and public expenditure. The empirical findings of the study concluded that there is no long-run relationship between public expenditure and national income. In addition, the Toda-Yamamoto approach inferred that there is no causality in any direction. Nasiru (2012) investigated the relationship between government expenditure and economic growth in Nigeria from 1961 to 2010. To test the direction of the causality study employed the Bound test approach of Pesaran at al (2001) and pair-wise Granger Causality test and found that there were no long-run relationships between government expenditure and economic growth. Moreover, the result of the causality analysis indicated that capital expenditure had a positive impact on economic growth whereas there was no causal relationship between current expenditure and economic growth and the study concluded that the public expenditure was dependent on the economic growth in Nigeria. Mayandy (2012) identified the evidence of Wagner’s law for Sri lankan Economy. The study concluded that the Sri Lankan economy did not follow Wagner’s law in the long run. Alfred M. Wu. Mi Lin (2012) analyzed the determinants of government expenditure and economic growth in China at provincial level and rejected Wagner’s hypothesis in China economy. Louis (2012) employed the co-integration and Toda-Yamamoto Granger Causality test to test the relationship and direction of the Causality between government expenditure and economic growth in Nigeria using time series data for 49 years. Toda-Yamamoto Causality test proved that there was unidirectional causality from total expenditure to economic growth implying that the study supported the Keynesian hypothesis. However, the study, in
general, empirically rejected the Wagner’s law. Bagdigen and Centitas (2003) studied the causality between Public Expenditure and Economic Growth in Turkey for 1965 to 2000 to test Wagner’s hypothesis. The study hypothesized that the causality ran from GDP to public expenditure and revealed that there was no causality in both directions. It meant that neither the Wagner’s law nor the Keynesian hypothesis was valid for the Turkish economy. Oktayer and Oktayer (2013) employed Tri-variate Causality analysis to find out the evidence of Wagner’s law in case of Turkey for 60 years of annual data and the inflation rate was used as the third variable in the study. The study concluded that there was no relation between government expenditure in real terms and real GNP. Al-Shatti (2014) conducted a study to analyze the impact of public expenditure on economic growth in Jordan for 1993-13 and found that there was no relationship between government expenditure (current and capital) on education and economic growth.

Section 5

2.5. Studies on causal relationship between tax revenue and public expenditure

The associated literature related to government expenditure and economic growth is the impact of government expenditure on tax collection or how the tax collection influences government expenditure. There exists a plethora of literature on the association between different aspects of tax collection and its likely consequences on government spending and economic growth. In the realm of the literature on government spending and tax collection, there are four major hypothesis: (i) Tax and Spend Hypothesis - it implies that increase in tax collection leads to higher level of expenditure; (ii) Spend and Tax Hypothesis - Government has to beef up its spending to widen and deepen the economic activity of the country resulting in increased tax collection; (iii) Fiscal synchronization hypothesis- it says that there is bidirectional causality
between government expenditure and government revenue measured in terms of tax collection; (iv) institutional separation hypothesis- the hypothesis states that government expenditure and government revenue are mutually independent to each other and neither of the variable does cause the change in each other. In a way, the literature puts into test the variants of Wagnerian as well as Keynsin hypothesis on the theory of public expenditure. The literature on the area is closely linked to the area of study. Important strands of thought on the area are discussed. Obioma (2010) analysed the relationship between government expenditure and government revenue in Nigeria. The study was based on time series data of 37 years from 1970 to 2007. The main objective of the study was to analyze the validity of four hypothesis, viz., (i) revenue and spend hypothesis, (ii) spend and revenue hypothesis, (iii) fiscal synchronization hypothesis; (iv) institutional separation hypothesis. The study employed the Engle-Granger two step co-integration techniques for the analysis along with Johnson co integration method and Granger Causality test. The study brought out that there was no long run relationship between government expenditure and government revenue. There was unidirectional causality between government revenue to government expenditure and the revenue spend hypothesis proved that the change in government revenue induced the change in government expenditure. Craig and Heins (1980) examined the effect of tax structure on state government spending in the United States of America from 1970 to 1975. The study showed a positive relation between elasticity of tax structure and spending of state governments. The relationship between tax revenue and public expenditure was proved in another study too in the USA. Joulfain and Mookerjee (1991) studied the trend and pattern in OECD Countries to analyze the causality between government spending and government revenue. The study brought out a strong relationship in support of the tax-spend hypothesis in Italy and Canada whereas in USA, Japan, Germany, France, United Kingdom, Austria, Finland, and Greece proved spend-tax hypothesis while Ireland put up evidences for fiscal
synchronization hypothesis. Baghestani and McNown (1994) used the cointegration approach to test the relationship between government revenue and expenditure in United States during the period 1955-1989. The study found evidence of cointegration but not of causality of any kind between tax revenue and government expenditure in the United States of America. Shah and Baffles (1994) used the Granger Causality test to find the causality between government revenue and expenditure in Latin America and found that there was a unidirectional causality from revenue to expenditure in Brazil. In addition the study also indicated that there was bi-directional causality between government expenditure and revenue in Argentina. Baffes and Shah (1990, 1994) found existence of strong bidirectional causality between government revenues and government expenditures for Brazil, Mexico and Pakistan while Argentina and Chile supported the causality from government revenues or found the evidence in favour of spend-tax hypothesis. Owoye (1994) analyzed the causal relationship between government expenditure and government revenue for the G7 countries using annual data during 1961-1990. The study employed the cointegration and error correction models for data analysis. The empirical findings of the study confirmed that there was the existence of bidirectional causality in all G7 countries except Japan and Italy. In the case of Japan and Italy there was unidirectional causality running from government revenue to government expenditures. Zoonnoor, S. H (1995) investigated the association between government expenditures and revenues in Iran for 1970 to 1990. The study analyzed the adjustment process by estimating a simple disequilibrium model of government expenditures and receipts. Using a constant shares model as well as a constant marginal shares model, the study compared the pattern of expenditures and the revenue structure before and after the Iran’s revolution. Park (1998) studied the dynamic link between the government expenditure and government revenue with the use of time series data from 1964 to 1992. The study found that there was unidirectional relationship between government revenue to expenditure in
Korean economy. Aziz et al. (2000) applied Toda-Yamamoto procedure to analyze the inter-temporal between government revenue and government expenditure in case of Malaysia with the use of annual data from 1960 to 1990 and the study concluded that there was bidirectional causality between government revenues and expenditures in Malaysia during the study period. Folster and Henrekson (2001) employed an econometric panel analysis to study the growth effects of government expenditure on taxation in rich countries from 1965 to 1970. The findings of the study revealed that there was robust negative relationship between government expenditure and growth in rich countries and showed that an increase in the expenditure by 1 percent leads to decline in the growth by 0.7% - 0.8%. Fasano and Wang (2002) tested the relationship between government spending and revenue for the Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates for 1975-2000. The empirical results supported revenue-spend hypothesis for Bahrain, United Arab Emirates and Oman. Government revenue was found to have driven up expenditure in those three countries. The evidence of bidirectional causality was found for Kuwait, Qatar and Saudi Arabia. Moalusi (2004) examined the causal nexus between government revenue and expenditure in Botswana utilizing the annual data for the period 1976 to 2000. The study adopted various time series econometrics techniques for the analysis purpose like cointegration test and Granger causality etc. The study concluded that there was the evidence of unidirectional causality running from revenue to spending in case of Botswana during the study period. Maghyereh and Sweidan (2004) tested the validity of tax-spend, spend-tax and fiscal synchronization hypothesis for Jordan economy from 1969 to 2002. The study employed multivariate error correction model with real GDP (as central variable) and real government expenditure and real government revenue. The result of the study brought out evidence of bi-directional causality between government revenue and government expenditure. Sobhee and Kumar (2004) tested the paradigms of tax and spend, spend and tax hypothesis with the use of
vector error correction model for 1970 to 1999 in Mauritius. The study accepted the hypothesis of tax and spend hypothesis for the Mauritian economy and found the causality between tax revenue and government expenditure. Al-Qudair (2005) studied the relationship between government expenditure and revenue in Saudi Arabia. A country living on its oil exports exhibited bidirectional causality between government revenue and expenditure in support of fiscal synchronization hypothesis. Koch et al. (2005) studied the implications of tax policy on economic growth for the period 1960 to 2002. The study indicated that decreased tax burdens were strongly associated with increased economic growth. Tsen and Kian-Ping (2005) tested the relationship in Malaysia for the period of 1965 – 2002. The results supported tax-spend hypothesis. Government revenue was found to have caused expenditure in Malaysia. Barua (2005) analyzed the revenue and expenditure causality in Bangladesh for 1974-04. The findings of Johansen test revealed long-run relationship between government expenditure, revenue and GDP. However the model suggested that there was no causal relationship between revenue and expenditure in the short run. Narayan (2005) examined the link between government revenue and expenditure in nine Asian countries. The study employed the Bounds Test approach. The study found that in 3 out of 9 countries, government revenue and expenditure were cointegrated. The findings of the causality analysis indicated that the direction of the causality were mixed in the case of Indonesia, Singapore, Sri Lanka in the short term whereas for Nepal both in the long and in the short-term causality did exist. The study, therefore, concluded that the tax-spend hypothesis was valid and in Indonesia and Sri Lanka, spend-tax hypothesis was valid in the long term. Ndahiriwe (2007) used both annual and quarterly data for the period 1960 to 2005 and analyzed the causal relationship between government spending and tax revenue in South Africa. The study revealed bidirectional causality between government spending and tax revenue. Nyamongo et al. (2007) in a study of the government revenue and expenditure in South Africa found that
government revenue and expenditure are cointegrated, and a long-run relationship existed between those two variables. Applying Granger causality through VECM model, it was found bidirectional Granger Causality which supported fiscal synchronization hypothesis. In the short-run, no Granger causality was found between variable, suggesting fiscal neutrality hypothesis in South Africa for the period of study. Habibullah and Dayang-Affizzah (2008) utilized the Granger causality, unit root and vector error correction model to analyze the dynamic interaction between government revenue and economic growth in 14 states of the Malaysian economy. The empirical findings of the study revealed that results were mixed for four hypotheses and concluded that municipals in Bau, Kalata, Lawas, Sibu and Subis supported the tax-spend hypothesis whereas in Kanowit, Kuching Rural, Sibu Rural and Sriaman municipals supported the spend tax hypothesis. The study found that only LubokAntu was the region which supported the fiscal synchronization hypothesis. On the other side, municipals in Baram, Betong, Limbang, Matu and Mukah supported the hypothesis of institutional separation. Taha and Loganathan (2008) examined causality between tax revenues and government spending in Malaysia. Annual data for 36 years from 1970 to 2006 showed that there was a long-run relationship between tax revenues and government spending. The result of the Vector autoregressive model stated bidirectional causality between tax revenue and expenditure during the study period. Wolde-Rufael (2008) observed a causal link between government expenditure and government revenue for 13 African Countries. The study found that there was bi-directional causality from expenditure to revenue in Mauritius, Switzerland and Zimbabwe while Uni-directional causality could be observed from revenue to expenditure in Ethiopia, Ghana, Kenya, Nigeria, Mali and Zambia. On the other side, the study also stated that there was no causality in any direction in Botswana, Boucle and Rwanda. Amoah and Loloh (2008) studied the causal linkages between government revenue and spending in Ghana. Researchers used annual data for the period
from 1983-2007 which was converted into quarterly data. Real and nominal values of variables were used in models. Time series variables were found to be integrated of order one for both nominal and real values. Engle-Granger bivariate methodology was applied to test for existence of co-integration. It was found that the revenue and expenditure are co-integrated. An error correction model was specified, long-run and short-run causality were obtained. Causality was found to run from expenditure to revenue in the long-run supporting spend-tax hypothesis, while revenue Granger cause expenditure in the short-run in support of tax-spend hypothesis. Eita and Mbazima (2008) found unidirectional causality between government revenue and expenditure in Namibia. Granger causality through vector auto-regression (VAR) method and annual data for the period from 1977 – 2007 were used. The paper provided evidence to support tax-spend hypothesis in Namibia. Aisha and Khatoon (2009) in a study of Pakistan economy for the period from 1972-2007, used unit root test, Engle-Granger approach of cointegration and error correction model on time series data. Government revenue and expenditure were found to be cointegrated and Granger causality test showed that government expenditure led to change in revenue and therefore spend-tax hypothesis was proved. Sriyana (2009) explained the relationship between tax revenue and government expenditure in Indonesia during the period of 1970 to 2007 with the use of cointegration test and Vector Error Correction Model (VECM). The results of the econometric analysis of the data confirmed the unidirectional causality between tax revenue and government expenditure in Indonesia and the direction of the causality was from tax revenues to government expenditures. The study concluded that the government should improve fiscal management. Keho (2010) made an attempt to analyze the cause and effect relationship between government expenditure and revenue of European countries using the data from 1960 to 2005. The empirical findings of various econometric techniques revealed the unidirectional causality between expenditure and revenue and the direction of the causality was from
government revenue to expenditures in sample period. Chamorro-Narvaez (2010) analyzed the effects of government expenditures on the growth of low and middle income countries with the use of time series annual data from 1975 to 2000. The study employed the Generalized Method of Moments (GMM) framework for analysis. The results of the Generalized Method of Moments (GMM) revealed that government spending on education; communications and transport accelerated economic growth. Sadiq (2010) on the other hand, found no causality between the two variables in Pakistan. Granger causality was used to study the relationship between federal and provincial taxes and expenditure in Pakistan for the period from 1980-81 to 2009-10. No Granger causality was found between revenue and expenditure in the federal and provincial level during the reference period of the period of study. Subhani et al. (2011) identified the relationship between government revenue and government expenditure in Pakistan. The study used the framework of granger causality test on time series data for 1979 to 2010. The results of the study provided evidence of unidirectional causality between the government expenditure and revenue. The direction of the causality was from tax revenue to government expenditure which stated that the previous lags of tax revenue had a causal impact on current government spending. Ravinthirakumaran (2011) studied the relationship between government revenue and expenditure in Sri Lanka using the time series data from 1977 to 2009. The study adopted the time series methodology of Engle-Granger’s approach of cointegration and error correction model for empirical analysis. The study found the evidence of bidirectional causality between government revenue and expenditure. The study also found the long-run equilibrium between the two variables in Sri Lankan economy. Owoye and Onafowora (2011) used autoregressive distributed lag (ARDL) Bounds Test and the Toda-Yamamoto approach to test the causality between tax revenues and government expenditures in twenty-two OECD countries, eleven European Union (EU) member states and eleven non-EU member countries. The study found that the long-run and short-run
causality differed across those groups within OECD. The study found the evidence in support of the tax and spend hypothesis in eight out of the twenty-two countries. Mehrara, Pahlavani, and Elyasi (2011) examined the relationship between government revenue and government expenditure in 40 Asian countries for 1995 to 2008. The results of unit root showed that variables were integrated of order one and the study employed Kao Panel cointegration test to find the relationship between government expenditure and government revenue. The findings of the causality analysis confirmed the bidirectional causal relationship between government expenditure and revenue in both long-run as well as short run analysis. The study found that the fiscal synchronization hypothesis was supported. Ali and Shah (2012) investigated the association between government revenue and expenditure for Pakistan. The study used yearly data from 1976 to 2009 and the study found that there was no causal link between both government expenditure and government revenue in Pakistan. Margareta (2012) concluded that there existed a negative relation between taxes and general level of government expenditures. The study used the panel data for the period 1975-2011 for 25 OECD countries. The empirical analysis of the study found a negative association between corporate income and economic growth. The study stated that higher tax rate negatively influenced the economic growth. Masenye, Motelle (2012) tested the hypothesis of government revenue and expenditure in Lesotho using quarterly data for the period 1991 to 2009. The study applied Granger causality test, Johansen procedure and error correction model to ascertain the causality between government revenue and expenditure. The empirical analysis of the study revealed that there was a unidirectional causality running from revenue to expenditure and concluded that causality runs from revenue to current expenditure. On the other side, there was no causality between revenue and capital expenditure. Omo and Taofik (2012) determined the long run interactions between government revenue and expenditure in Nigeria during 1970 to 2008. The study applied Autoregressive Distributed Lag (ARDL)
Bound Test procedure for data analysis. The empirical findings of the analysis stated that there was a long run relationship between government expenditures and revenues. The study proved tax-spend hypothesis. Rafaqet and Mahmood (2012) analyzed the dynamic link between government revenue and expenditure for Pakistan by using annual data from 1976 to 2009. The author applied Johansen cointegration and Granger causality techniques to test the hypothesis. It was proved that there was no long run relationship between revenue and expenditure. Saeed and Somaye (2012) tested the causality and the long-run relationships between government expenditure and government revenue in OPEC during 2000-2009. The oil revenue was taken as proxy of total revenue because the major share of total revenue in those countries accrued from the sale of oil. The study showed that there was a positive and unidirectional long run relationship between oil revenue and government expenditures in Oil Producing and Exporting Countries (OPEC). Al-Khulaifi (2012) tested the hypothesis of government revenue and expenditure in Qatar for 30 years from 1980-2011. There was a long run relationship between government revenue and expenditure in Qatar and a unidirectional causality between both the variables. The causality ran from government revenue to government expenditure. Subhani et al. (2012) found and its direction to confirm the tax-spend hypothesis-government expenditure and revenue for Pakistan for the period 1979-2010. It was found that government revenue and government expenditure in Pakistan was closely associated and unidirectional in nature for the period under investigation. Elyasi and Rahimi (2012) found bidirectional causality between government revenue and expenditure in Iran for the period 1963-2007. Abdulla (2012) studied the relationship between government expenditure and revenue in Qatar for period 1980 to 2011 and found the unidirectional causality between both the variables which runs from government revenue to government expenditure or follow the revenue spend hypothesis. Aregbeyen and Insah (2013) examined the link between government expenditure and government revenue for Ghana and Nigeria for
period 1980 to 2010 and found the feedback relationship between public expenditure and tax revenue in other words both the economies supports the fiscal synchronization hypothesis. The study also highlights that the change in expenditure have a negative impact on revenue in Nigerian economy whereas it has positive impact on Ghanaian economy. Ahmad et al (2013) analyzed the impact of taxes (Tax Revenue) on economic growth of Pakistan for period of 1976-2011 and revealed that tax and exchange rate has negative and significant effect on economic growth in short and long run. The study recommended that Direct taxes should be increases (rather than indirect taxes) to increase the economic prosperity of the country. Saysombath and Kyophilavong (2013) found the evidence for a unidirectional causality from spending to revenue in the Lao PDR from period 1980 to 2010. Hamdi and Sbia, (2013) tested the relationship between government revenues and expenditures in six countries of Gulf Cooperation Council (GCC) i.e. Saudi Arabia, Kuwait, United Arab Emirates, Qatar, Oman and Bahrain. The research study was based on the trivariate analysis using the gross domestic Product as a third variable along with the government revenues and expenditures. The study revealed that government expenditures Granger caused government revenues in Qatar and the United Arab Emirates whereas government revenues Granger caused government expenditures for Saudi Arabia. The study also indicated a unidirectional causality from government expenditures to GDP in Bahrain. In the case of Kuwait, Qatar and Saudi Arabia, GDP caused government revenues while GDP caused government expenditures in case of Oman and Qatar. Al-Zeaud (2014) analyzed the relationship between government revenue and Expenditure of Jordan for 1990 to 2011 and found bidirectional causality from government revenues to government expenditure. The study concluded that the Jordan economy supported the fiscal synchronization hypothesis which stated that government made its revenues and expenditure decisions simultaneously. Lukovic, Grbic (2015) tested the causal relationship between government revenue and government expenditure in Serbia, using quarterly
data and observed a unidirectional causality from government expenditure to government revenue. Abbas Ali Rezaei (2015) tested the relationship between government revenue and government expenditure in Iran using the annual data from 1978 to 2012. It was found that a unidirectional causality existed from government revenue to government expenditure or study concluded that Iran economy supported the Freidman (1978) hypothesis which stated that government revenue drove government expenditure and revenue had positive impact on government expenditure. Petanlar and Sadeghi (2012) checked the causality and long run relationship between government expenditure and government revenue in oil exporting countries for 2000-2009 and showed that there was a positive unidirectional causality between oil revenue and government expenditure. The study concluded that “revenue and spend” hypothesis was valid for oil exporting countries.

Section 6

2.6. Studies based on determinants of public expenditure.

Fisher (1916) tried to find out determinants of public expenditure in 48 states of United States of America for 1957. Using per capita income, urbanization and density of population as major determinants of public expenditure the study concluded that density of population was inversely related to government expenditure whereas the urbanization had positive sign with public expenditure. Fabricant (1952) studied determinants of public expenditure in U.S.A. and found that per capita income, degree of urbanization and density of population are the three variables explaining 72% of the variation in government expenditure in USA. Adam (1965) identified determinants of public expenditure in United States for 1957. The study observes that socio-economic variables are the major determinants of public expenditure in USA across states for the year 1957. Bahl and Saunders (1965) examined determinants of change in government spending in USA and found the Federal
aid is the most important determinant of government spending. Pryor (1968) examined the determinants of public expenditure in different countries and found a significant and positive association between per capita income and public expenditure. Henning and Taussing (1974) identified various determinants of public expenditure in United States for 70 years from 1900 to 1970 and found that the elasticity of non-defense expenditure with respect to income was 1.5% in the long run and the short run elasticity of government spending was relatively less. Letz (1980) studied the variation in composition and size of public spending in 37 developed countries along with the analysis of factors affecting government spending decision. The study found a positive relationship between welfare expenditure, degree of organization, literacy rate, per capita income and degree of monetization. GovindaRao (1981) found that ideological learning of the ruling parties had not influenced the level of expenditure in different states in India. The author also concluded that less stable government had a tendency of spending more. Datta (1985) made an attempt to identify the determinants of public spending in West Bengal economy for 1950-51 to 1973-74. The study classified government expenditure into revenue, capital and non-development expenditure. The study used per capita income, degree of urbanization, grants, tax revenue as independent variables and concluded that the per capita income is the positive determinant of public spending. Mann and Schulthuses (1986) made an attempt to analyze the determinants of public spending in Argentina for 1930 to 1977. The study classified public expenditure into (i) current expenditure; (ii) wages and salaries (iii) impersonal goods and services ; (iv) transfer of families (v) capital expenditure. It was found that real per capita gross domestic product had significant contribution in expenditure-output ratio whereas the tax revenue and non-elected government had negative relation with the expenditure. The rate of inflation influenced the expenditure-output ratio in both directions (positive as well as negative). The study concluded that the rate of economic growth, political factors and rate of inflation are major determinants of public
spending in Argentina. Abizadeh and Yousefi (1988) analysed the impact of economic and political factors on government spending in Canada and found that (1) there was a direct relation between dependency ratio and federal government expenditure on social goods and services; (2) higher rate of unemployment in previous years led to higher public spending; and (3) real income and public expenditure are positively correlated. Reddy K.N. (1988) analysed the determinants of public expenditure in India with the use of multiple linear regression models and observed that 99% of variation in public spending was explained by the level of development, technological change and degree of urbanization. Sham Bhat and UmashankarPatnaik (1991) analysed the determinants of public expenditure and their variability between congress and non-congress government with the use of cross section data for 22 Indian states for 1985-86. The study revealed the following: (i) Per capita income, primary sector contribution, literacy rate and percentage of scheduled caste and scheduled tribe in total population had positive impact on government spending whereas the density of population had negative impact on government spending; (ii) Per capita income, literacy rate and scheduled caste and schedule tribe in total population are the main determinants of health expenditure and social welfare expenditure and economic services expenditure; (iii) Congress government spent less on education, economic services as compared to non-congress government. Granado, Martinez-Vazquez and Robert M. McNab (undated) attempted to analyze the relationship between fiscal decentralization and the functional composition of public expenditures. The study used a distance-sensitive representative agent model for an unbalanced panel data set of 59 developed and developing countries for 30 years. The study hypothesized that higher levels of fiscal decentralization induced demand driven production of private goods. The empirical work of the study found that expenditure decentralization positively and significantly affecting the share of health and education expenditures.
Ramey and Ramey (1995) developed a research study on the relationship of instability of socio-economic system and economic growth with the sample of 29 countries. The study presents the negative impact of instability of government expenditure on economic growth. The study states that countries with the higher level of instability has lower economic growth rate. Moreover the results of the study also show that the ratio of investments in GDP has a little impact on the relationship between instability and dynamics of production. In addition political instability may be an important factor of instability in government expenditure.

Rodrik (1998) found that openness might influence government spending. The author explained that openness in the economy was associated with the size of the government sector. The analysis of the study found that there was the positive relationship between openness, measured by the ratio of imports and exports to GDP and government spending and that relationship was strongest when the terms of trade risk was the highest. The study also considered the Macroeconomic factors as another important determinants of government spending in developing countries. Doessel and Valadkhani (2003) analysed government expenditure in Iran for the period 1963-2000. The study made a distinction between economic/structural determinants and institutional determinants of public expenditure and revealed “double rejection", which implied that neither the economic/structural determinants nor institutional determinants were sufficient enough to explain government expenditure in Iran. Mupimpela (2005) analysed the determinants of public expenditure in Botswana. The study used national income, level of monetization, openness of the economy, government revenue and expenditure on social services as variables for the analysis. The study concluded that openness of the economy and expenditure on social services played a significant role to determine economic growth in Botswana (Grisorioa and Protab, 2011) examined the relationship between fiscal decentralization and public expenditure
composition. The study analyzed the effects of ongoing decentralization process in Italy and the share of different categories of public spending over the period 1996-2008. The empirical work of the panel data analysis discovered that the level of decentralization has influenced the composition of expenditure. Tayeh and Mustafa (2011) focused on the factors affecting government expenditures in Jordan and analysed the dynamic link between Jordanian public spending and its determinants. The study concluded that population; unemployment and inflation rates had a significant impact on public expenditures on the Jordanian government. Aregbeyen and Akpan (2013) analyzed the long run determinants of increase in government spending in Nigeria. The study utilized the annual time series data for a period of 51 years from 1960 to 2010. The study found that inflow of foreign aid had significant contribution in the expansion of government current expenditure whereas debt servicing led to reduction in the components of government expenditure. The study also explained that the revenue was the major factor inducing long-term government growth. The study indicated that openness had a significant negative association with government spending and, on the contrary, the higher population in urban areas, higher was the government expenditure. Paulo Reis Mourao analyzed the determinants of government expenditure which explained the growth of Portuguese public expenditures at the end of World War II. The study used a set of four variables, viz., number of Public employees, number of unemployed people, current transfers per capita and rate of openness. The study concluded that number of unemployed people had the significant impact on the growth of public spending, which explained 30% variation in Portuguese real total expenditures. Olusegun Ayodele Akanbi (2014) that the pattern and determinants of government expenditure with specific reference to capital and current expenditure in Nigeria for 1974 to 2012 showed that capital and current expenditure war elastic with the shocks in total government spending and the total government expenditure was found to be elastic with the shocks in capital and recurrent expenditure. Moreover, total
and capital expenditure were elastic with the shocks in government revenue. The study also indicated that the current expenditure was significantly influenced by shocks in government revenue. The effects of governance revealed that current expenditure was not affected by any elements of poor governance. Foye (2014) identified the macroeconomic determinants of public capital spending in Nigeria using Error Correction Mechanism (ECM). The study found that real Gross Domestic Product, budget deficit, government debt, trade openness, public debt servicing, private investment, foreign direct investment and previous public capital spending influenced public capital spending whereas degree of urbanization did not have any effect on capital expenditure. Alm and Embaya (undated) analyzed determinants of real per capita government expenditure in the Republic of South Africa for 47 years from 1960 to 2007, which was a tumultuous period for South Africa. The multivariate cointegration techniques revealed that per capita income, per capita government spending, the tax share, and the wage rate are co-integrated. The results also showed that per capita government spending was positively influenced by external shocks or the external shocks play an important role in government spending.

Section 7

2.7. Gaps in the Literature and Contribution of the Present Study

A close perusal of theoretical as well as empirical studies has brought to light that relationship between government expenditure and economic performance are not uniform either across countries or within countries over a period. The observation, in turn, underlines that established theories on public expenditure such as the different variant of Wagner’s Law or Physiocrats to Post-Keynesian Schools of thought have inherent limitations in mechanically applying to a country or within a country, to any province or state government(s). Further, the divergence of Wagner’s Law with Keynesian
approach to the association between government spending and economic performance of an economy lie in its causality between these variables—whether the relationship is uni-directional or bi-directional. A detailed review of the literature has convincingly proved that it is rather difficult to arrive at generalizations on the association between economic performance and government spending. In the context of neo-liberalism pursuing in India since 1991, government spending and its different dimensions have varied ideological rooting as well because rejection or acceptance of a particular hypothesis with respect to the association between state’s role in economic activity manifested through government expenditure amount to posing questions on the basic premise of development paradigm of the India economy for the last quarter of a century. Although the literature on different versions of Wagner’s Law and different hypothesis associated with Economic growth and government spending, most of such literature are in the context of other countries and there exist few studies in the Indian context on the aspect of different dimensions of government spending and its distributional consequences on various segments and social groups in the society. At the outset, the present study addresses the question of distributional effects of the change in the structure of government spending in a relatively backward state like Rajasthan.

Another dimension of existing literature is on the very financing of government spending. Tax revenue is the major source of government finance and studies have examined the association or causality between tax revenue and public expenditure. In this case, a direction of causality is equally important from a political economy perspective as suggested by tax-spend hypothesis. It could also be Spend-Tax Hypothesis or the causality could be bi-directional. In addition to it, there is hypothesis such as fiscal synchronization or fiscal neutrality hypothesis. Testing of these hypotheses in the context of a state like Rajasthan assumes special significance on account of the
distributional impact of the policy paradigm emerging out of the conclusion. It is a major gap in the literature on the validity of those hypotheses in the state of Rajasthan and it assumes special significance particularly in an era of curtailment of deficit financing ruling the root of the ideological thinking in the neoliberal era.

The very structure of government spending (What question), its changes and movements are rather important for a state economy (How Question) as in the case of any nation. It is equally important to examine major determinants of government spending and reasons for its break if any (Why question). In the context of Rajasthan economy, no such attempts have been made yet and it is spotted as a major gap in the literature on public finance of the state economy.

There is a problematization issue in different versions of Wagner’s Law and Keynesian approach on government spending when it is transplanted to the context of a state economy. The present study intends to make as well as suggest problems in adapting Wagner’s Law in the context of Rajasthan. It is on account the fact that social, political and economic condition in the state of Rajasthan is different from other states as it is included in the group of BIMARU state. Low per capita income, low living standard, poverty, the poor performance of social sectors, under-developed industrial sector as compared to other states in India make the study more relevant.

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