CHAPTER 1

INTRODUCTION

1.1 STATEMENT OF THE PROBLEM

The relationship between government expenditure and economic growth is an important subject of analysis and debate. As a fiscal policy instrument, government expenditure can have great influence on economic growth depending on how it is utilized and managed by the government.

Government mainly performs two functions, namely, protection and provision of certain public goods- the enforcement of property rights and the creation of rule of law reflect the protective functions of government and, the provision of public goods for collective consumption includes defense, roads, education, health, power etc. These functions can improve economic efficiency and promote economic growth. Increase in government expenditure on socio-economic infrastructure lead to positive externalities and encourages economic growth. For example, government expenditure on education and health leads to increase in productivity and efficiency and promotes economic growth. Similarly, government expenditure on infrastructure such as roads, communication, power etc. reduces the cost of production, increases private investment and enhances economic growth.

However, the financing of government expenditure through increase in taxes or borrowing or both can retard growth. Increase in taxes to finance rising government expenditure result in disincentive impact on the private sector. Further, increase in borrowing by the government, especially from banks, will compete away the private sector leading to reduction of private investment.
Over the past, a substantial volume of empirical research has been directed towards identifying the elements of government expenditure that bear significant association with economic growth. There are certain revenue expenditures by the government for example on education, health, transportation, which are quite productive and contributory but the capital expenditure if not exploited properly may be quite unproductive.

There has been a phenomenal increase in the level of government expenditure in relation to state income in Assam in the past few years. Although central funds are available for state economic development spending, a significant portion of economic development spending is funded with state taxes. There have been persistent attempts by all the governments including the Centre to contain revenue expenditures and thereby to bridge the revenue deficits in the budgets as set out in the Fiscal Responsibility and Budget Management Bill legislated by the Centre in the parliament and mandated in the budget.

Against this background, it is found imperative to examine whether revenue expenditure has adversely affected the economic growth, or has helped the economy to grow, along with examining the growth effects of total government expenditure, capital expenditure and public expenditure by sector.
1.2 THEORETICAL BACKGROUND

THE CLASSICAL VIEW:

The classical economists (Smith 1776, Ricardo 1821) viewed that countries with higher government expenditure would experience lower economic growth. Adam Smith (1776) confined the subject of public expenditure mainly to defense, the administration of justice (i.e. law and order) and certain public works and hence advocated limited role of government. Adam Smith propagated that governmental activity was strictly limited to the three duties of sovereign. The classical economists Smith (1776), Ricardo (1821) advocated the policy of laissez-faire in economic affairs. According to the classical economists, it is the ‘invisible hand’ – the automatic equilibrating mechanism of the perfectly competitive market, which maximizes the national income. The classical economists viewed that the state activities should be confined to the bare minimum, because interference with the free economy by the government would hinder economic progress.

According to the classical economists increase in government expenditure requiring imposition of increasing amount of taxes, result in disincentive impact on the private sector to work and invest. Further they view that increase in government expenditure financed through increase in government borrowing (especially from banks) will compete (crowd out) away the private sector, thus reducing private investment.

Thus, according to the Classical view, countries with higher government expenditure would experience lower economic growth and hence the classical economists favour for lower level of government expenditure for promoting economic growth.
THE KEYNESIAN VIEW:

John Maynard Keynes (1936) supported higher government expenditure in order to promote economic growth. The tendency of continuous increase in government expenditure was observed throughout the world particularly since late nineteenth century. However it was clearly stated by Keynes in the twentieth century. Keynes reacted to the incidence of world depression of 1930s by suggesting that even government expenditure in the form of ‘digging the holes and filling them up’ could generate employment and additional income in the economy. Keynes viewed that increasing the government expenditure promotes economic growth by driving up aggregate demand. A theoretical basis for recent development in government expenditure program is provided by Keynes’ General Theory of Employment, Interest and Money (1936).

According to Keynes, government expenditure, once initiated, continues to increase generation of income in the economy through the multiplier process. In Keynesian economics, increased government expenditure is thought to raise aggregate demand and increase consumption, which in turn leads to increased production.

According to the Keynesian view, government expenditure as a tool of fiscal policy is useful for achieving short term stability and higher long run growth rate. In the Keynesian model, increase in government expenditure leads to higher economic growth and hence the Keynesians support higher government expenditure in order to promote economic growth.
NEO-CLASSICAL VIEW:

Contrary to the Keynesian view, the neo-classical growth models argued that fiscal policies cannot bring about changes in long-run growth of output. Solow (1956) in his neo-classical/exogenous growth model viewed that there is no long run impact of government expenditures on the economic growth rate; the long run growth rate being driven by population growth (i.e. rate of labour force growth) and the rate of technological progress which is determined exogenously. The neo-classical growth model predicts that income per capita of countries will converge on the basis of the assumption of diminishing marginal productivity of capital. Solow viewed that government policy cannot affect growth rates, except temporarily during the transition of economies to their steady state.

MYRDAL’S VIEW:

Karl Gunnar Myrdal was a dissenter from mainstream neo-classical analysis. Myrdal in his Economic Theory and Under-Developed Regions, (1957) argued against the belief by the neoclassical mainstream that economic processes generally tend to develop towards an equilibrium outcome. Myrdal asserted that most economic processes exhibit characteristics of ‘circular and cumulative causation’, so that a small initial change amplifies over time to become a substantial change (Myrdal 1957). Myrdal believed that government executed development plan can set in motion a process in which circular forces cumulate in an upward spiral of development, by reducing the backwash effects and strengthening the spread effects in the underdeveloped countries. Backwash effects are the result of interregional flows of goods and factors i.e. migration, capital movements and trade. Spread effects refer to certain centrifugal ‘spread effects’ of expansionary momentum from the centers of economic expansion to other regions.
Myrdal advocated planned investment in different industries and emphasized the need for simultaneous engagement by the state in areas such as infrastructure, health and education. According to Myrdal (1957), “Breaking social chains and creating a psychological, ideological, social and political situation propitious to economic development becomes the paramount duty of the state in underdeveloped countries. The sphere of state action is very vast. It includes maintaining public services, influencing the use of resources, influencing the distribution of income, controlling the quantity of money, controlling fluctuations, ensuring full employment and influencing the level of investment”.

**NEOCLASSICAL COUNTER-REVOLUTION VIEW:**

The neoclassical counter-revolution school of the 1980s viewed that state intervention in economic activity slows the pace of economic growth. In the 1980s, the dominant political control of conservative governments in the United States, Canada, Britain, and West Germany gave rise to a neoclassical counter-revolution in economic theory and policy. The main argument of the neoclassical counter-revolution is that underdevelopment is the result of poor resource allocation due to incorrect pricing policies and too much state intervention by over-active developing-nation governments. Some of the leading writers of the counter-revolution school are Lord Peter Bauer, Deepak Lal and Ian Little. The neoliberals of the neoclassical counter-revolution are of the view that economic efficiency and economic growth will be stimulated by privatizing state-owned enterprises, eliminating excessive government regulations and price distortions in factor, product, and financial markets, permitting competitive free markets to flourish and promoting free trade and export expansion.
THE MARKET FRIENDLY APPROACH:

The most recent variant on the neoclassical counter-revolution is the market-friendly approach which is associated mainly with the writings of the World Bank and its economists. The market friendly approach views that less developed countries’ product and factor markets have many imperfections and governments do have a key role to play in facilitating the operation of markets through market friendly interventions- for example, by investing in social and economic infrastructure and by providing a suitable climate for private enterprise.

ENDOGENOUS GROWTH THEORY:

Models of endogenous growth developed by Romer (1986), Lucas (1988), Barro (1990) and Rebelo (1991), view that the government plays an active or key role in the growth process. The work of Barro (1990) has given a new direction to the investigation of the impact of fiscal policy (government expenditure) on economic growth. According to the endogenous growth models with fiscal policy, higher taxation reduces output, but such losses may be offset, by using the proceeds for productive expenditure items (Barro 1990, Turnovsky 2000). Endogenous growth models of Barro (1990) and King and Rebelo (1990) view that taxation which produces distortion and productive expenditures will affect the long run growth rate.

Robert Barro (1990), points out that government expenditure on investment and productive activities or services should contribute towards growth whereas government consumption expenditure which he identifies as non-productive government expenditure is growth retarding. According to Barro (1990), an increase in the share of non-productive government consumption expenditure lowers the growth rate. This is because a higher share of government consumption expenditure has no direct effect on private-sector
productivity, but leads to a higher income-tax rate. Thus as pointed out by Barro, as individuals retain a smaller fraction of their returns from investment, they have less incentive to invest, and the economy tends to grow at a lower rate.

The introduction of endogenous growth models incorporating the government sector has led to the conclusion that fiscal policies can affect the long run growth rate of an economy (Barro and Sala-i-Martin 1992).

Endogenous growth theory provides a theoretical framework for analyzing endogenous growth i.e. persistent GNP growth that is determined by the system governing the production process rather than by forces outside that system. Endogenous growth theory assumes that public and private investments in human capital generate external economies and productivity improvements that offset the natural tendency for diminishing returns, thus leading to sustained long-term growth. Therefore, endogenous growth theory seeks to explain the existence of increasing returns to scale and the divergent long-term growth patterns among countries. According to the endogenous growth theory, governments may improve the efficiency of resource allocation by providing public goods (infrastructure) or encouraging private investment in knowledge-intensive industries where human capital can be accumulated and subsequent increasing returns to scale generated.

Thus, in contrast to the neoclassical counter-revolution theories, models of endogenous growth suggest an active role for public policy in promoting economic development through direct and indirect investments in human capital formation (education), infrastructure and research and development.

Thus, given the contrasting arguments, the conclusion can be drawn out that while Classical economists favour for lower level of government expenditure for promoting economic growth, Keynesians support higher
government expenditure in order to promote economic growth. Proponents of endogenous growth models suggest an active role for public policy in promoting economic development through investments in productive activities or services such as human capital (education), infrastructure.

1.3 REVIEW OF LITERATURE

Many researchers have attempted to examine the impact of government expenditure on economic growth. On the basis of the arguments as regard to the positive and negative effects of government expenditure, some economists (Daniel J. Mitchell, James S. Guseh and others) theoretically argue for a low level of government expenditure for promoting economic growth, while some other economists (D. Dillard, A. P. Lerner and others) favour for higher level of government expenditure in order to boost economic growth. Advocates of higher government expenditure argue that increase in government expenditure on socio-economic infrastructure encourages economic growth as these expenditures are believed to have significant positive externalities. The proponents of lower government expenditure argue that higher government expenditure undermines economic growth by reducing the resource availability for the productive private sectors since the resources are transferred from the productive private sectors to the government.

Contrast to the standard presumption that government expenditure supports the growth objective, evidences show that it may have positive as well as negative effects on the economy. As stated by Philip J. Grossman (1990), “Economic theory suggests that government contributes to total economic growth in two ways: positively, through the provision of Pigovian public goods and services; and negatively through the inefficient provision of such goods and services and the distortionary effects attendant with their provision.”
Gwartney *et al.* (1998) in their study found a strong and persistent negative relationship between government expenditures and economic growth both for the developed economies of the OECD and for a larger set of 60 nations around the world. According to Gwartney *et al.* (1998) government expenditure on core functions contributes positively to economic growth. They further hold that expansion of government much beyond those core activities will exert a negative impact on the economy.\(^1\)

Studying the linkage between government size and economic growth for a group of 115 countries during the period 1960-1980, Ram (1986) found that the overall impact of government size on growth is positive in almost all cases. Examining the relationship between government expenditure and economic growth in New Zealand, Erkin (1988) found that higher government expenditure does not hurt consumption, but instead raises private investment that in turn accelerates economic growth. Al-Yousif (2000) found that government expenditure has a positive relationship with economic growth in Saudi Arabia.

Some studies show that total government expenditure or a large government sector has a negative effect on growth (Romer 1990, Alexander 1990, Folster and Henrekson 1999, Engen and Skinner 1992, Hansson and Henrekson 1994, Folster and Henrekson 2001, Taban 2010). Dar and Amir Khalkhali (2002) showed that countries with a large government size have lower productivity of the capital input resulting in lower economic growth. Hence, the advantage of a small government sector is that it results in greater efficiencies due to fewer policy induced distortions, lower tax burden and absence of crowding out effects. Mitchell (2005) argued that the American

\(^1\) Gwartney *et al.* (1998) view that the core functions comprise of two general categories (1) activities that protect persons and their property from plunder, and (2) provision of a limited set of goods that for various reasons markets may find it difficult to provide.
government expenditure has grown too much in the last couple of years and has contributed to the negative growth. The author suggested that government should cut its spending, particularly on projects/programs that generate least benefits or impose highest costs.

Examining the relationship between government expenditure and economic growth in OECD countries, Folster and Henerekson (2001) found that the relationship between the two is negative. However, Agell, et al. (1999) examined the relationship between government expenditure and economic growth in OECD countries and found that the relationship between the two is insignificant.

In the literature it is usually stressed that the impact of government expenditure on economic growth depends on the type of expenditure that the government incurs, whether government expenditure is directed more towards current or capital heads. Government expenditure on capital head is likely to directly increase capital formation and foster economic growth. However current expenditure is argued to be less productive than capital expenditure.

In most of the studies, the main conclusion is that government consumption expenditure has a negative influence on growth (Landau 1983, Grier and Tullock 1989, Barro 1991, Easterly and Rebelo 1993, Slemrod et al. 1995, Sala-i-Martin et al. 2004) while public investment has a positive effect on economic growth (Aschauer 1989, Knight et al. 1993) or has little relation (insignificant relationship) with growth (Barro 1991). Easterly and Rebelo (1993) found that although public enterprise investment have no effect on growth but the general government investment including the infrastructural investments on transportation and communication has a positive relation with growth.
Examining the growth effects of government expenditure of a panel of 30 developing countries over the decades of the 1970s and 1980s, Bose et al. (2003) found that

1) The share of government capital expenditure in GDP is positively and significantly correlated with economic growth but current expenditure is insignificant. 2) At the sectoral level, government investment and total expenditures in education are the only outlays that are significantly associated with growth once the budget constraint and omitted variables are taken into consideration. Therefore, they concluded that education is the key to growth for developing countries.

Assessing the effects of government expenditure on economic growth for a sample of 39 low-income countries during 1990s, Gupta et al. (2005) showed that countries where government expenditure is more on wages tend to have lower growth, while those countries that allocate higher share to capital and non-wage goods and services by cutting their current expenditures register faster growth.

Using data from 43 developing countries over 20 years, Devarajan et al. (1996), found that an increase in the share of current expenditure has positive and statistically significant growth effects but the relationship between capital expenditure and per capita growth is negative. Thus seemingly productive expenditures, when used in excess could become unproductive. According to Devarajan et al. (1996) the results of their study imply that developing-country governments have been misallocating public expenditures in favour of capital expenditure at the expense of current expenditure. Kweka and Morrissey (2000) observed similar result for Tanzania. Gregoriou and Ghosh (2009) in their study of 15 developing countries have also found similar results.

There are different relationships between different government expenditures and growth. Kneller et al. (1999) categorized government
expenditure into: productive and non-productive expenditure. These are distinguished from each other on the basis of whether they are included in the private production function or not. Kneller et al. (1999) viewed that the productive government expenditures consists of general public services, defense, educational, health, housing, and transport and communication expenditures whereas the non-productive government expenditures consists of social security and welfare expenditure, expenditure on recreation and economic services. Using a panel data of 22 OECD countries over the period 1970-95, they found that productive government expenditure enhances growth, while non-productive expenditure does not.

However, there are disagreements regarding which government expenditures should be productive or unproductive (Summers and Heston, 1988, Grier and Tullock 1989, Barro and Sala-i-Martin 1995, Devarajan et al. 1996). But the productive government expenditures may not be positive in growth regressions. Musgrave (1997) pointed out that if a so called ‘productive’ category of public spending is not used effectively, it can have a negative impact on growth. Therefore, he argued that what matters most for public spending is how effective it is.

From the empirical analysis, it is found that the capital component of expenditure is more productive if used properly or efficiently. However, there is a debate regarding which component is more influencing. There are certain revenue expenditures by the government, for example on education, health, transport and communication which are quite productive and contributory but the capital expenditure if it is not used properly may be quite unproductive. Hence revenue expenditure can also contribute positively to economic growth, which may not be the case with capital expenditure.
Some Time Series Evidence from India

Examining the relationship between public sector spending and economic growth in India, Khundrakpam (2001) employed the ARDL model and found that although public expenditure has a positive influence on economic growth over the long run but trade off between the two occurs in the short run. Studying the relationship between government expenditure and economic growth in India, Dash and Sharma (2008) found that government expenditure has a positive impact on economic growth. Applying cointegration and error correction model in Indian context, Tulsidharan (2006) found that in nominal terms higher economic growth invariably is accompanied by an increase in government final consumption expenditure.

Examining the impact of aggregate government expenditure and its two broader components such as revenue expenditure and capital expenditure on the growth rate of output, Mallick (2008) employed the structural vector autoregression methodology and found that neither aggregate expenditure nor the capital expenditure does have significant influence on the growth rate of the Indian economy. Rather, it is the revenue expenditure, which to some extent, explains the variation in growth rate and it is again in the positive direction.

Studies relating to Public Expenditure in Assam

Choudhury (2002) in her study of budgetary expenditures in Assam has shown that public expenditure has increased over time. As the growth rate of Assam economy was still dismal, the study states that public expenditure has a poor effect on the state’s economy.
1.4 OBJECTIVES OF THE STUDY

The objective of the study is to examine the impact of government expenditure on economic growth in Assam over the period 1981-82 to 2006-07.

The following are the specific objectives:

1. To study the trend and pattern of government expenditure in Assam over the study period.
2. To investigate the existence of a long run equilibrium relationship between government expenditure including gross fixed public capital formation and economic growth.
3. To estimate the significance of the selected variables both in the long run and short run.
4. Based on the investigation, to prescribe policy measures.

1.5 HYPOTHESIS:

- Revenue expenditure and gross fixed public capital formation is conducive to economic growth of the state.
1.6 DATA, CONCEPTS AND METHODOLOGY

DATA

The study uses the annual time series data of the growth rate of real GSDP denoted by Y (at 1999-2000 constant prices), the growth rate of real per capita GSDP denoted by YPC (at 1999-2000 constant prices), the share of total government expenditure in GSDP denoted by GE, the share of revenue expenditure in GSDP denoted by RE, the share of capital expenditure in GSDP denoted by CE, the share of ‘other expenditures’ in GSDP denoted by OE, the share of gross fixed public capital formation in GSDP denoted by GFPCF, the share of revenue expenditure under general services, social and community services, economic services, grants-in-aid and contribution in GSDP, denoted by RGS, RSCS, RES, RGR respectively, the share of capital expenditure under general services, social and community services, economic services, repayment of loans to centre, discharge of internal debt, loans and advances in GSDP, denoted by CGS, CSCS, CES, RLC, DID, LAD respectively, the share of revenue expenditure under agriculture and allied services in GSDP, denoted by RAG and the share of capital expenditure under agriculture and allied services, water and power development, transport and communication in GSDP, denoted by CAG, CWP, CTRC respectively for Assam from 1981-82 to 2006-2007. Economic growth is measured by the growth rate of real Gross State Domestic Product and the growth rate of real per capita Gross State Domestic Product.
CONCEPTS

Total government expenditure is the sum of expenditures of-

I. Consolidated Fund- Revenue Account and Capital Account.

The terms ‘Revenue expenditure’ and ‘Capital expenditure’ are used in lieu of expenditure from the Revenue Account and Capital Account respectively. Revenue expenditure of the government is broadly classified as consumption expenditure (i.e. public or government purchase of current goods and services e.g. consumables, labour etc) and transfer payments. Within the broad classification of revenue expenditure include salary and wages, election, interest payment, pension, subsidies, grants to local bodies etc. Capital expenditure consists of capital outlay on economic overheads like roads and railways, electricity generation, schools and hospital buildings and facilities and other investment projects, lending (disbursements of loans and advances) and repayment of loans.

II. OTHER EXPENDITURES

Government expenditures under Contingency Fund Account and Public Account are consolidated and classified as ‘Other Expenditures’.

Disbursement from the Contingency Fund includes advances from Contingency Fund, repayment to the Consolidated Fund and Closing balance.

The heads of disbursement under Public Account Fund are

(a) Small Savings, Provident Funds, etc.
(b) Reserve Funds.
(c) Account with Other Countries.
(d) Suspense and Miscellaneous.
(e) Remittances.
(f) Inter-government adjustment.
Revenue expenditure is divided under the following four heads as given below:

1. General Services
   (a) Organs of State
   (b) Fiscal Services
   (c) Interest Payments and Servicing of Debt
   (d) Administrative Services
   (e) Pension and Miscellaneous Services

2. Social and Community Services
   (a) Education, Art and Culture
   (b) Medical, Family Planning, Public Health and Sanitation
   (c) Others

3. Economic Services
   (a) General Economic Services
   (b) Agriculture and Allied Services
   (c) Industry and Mineral
   (d) Water and Power Development
   (e) Transport and Communication
   (f) Other Economic Services


Capital Expenditure is divided under the following heads as given below:

1. General Services
2. Social and Community Services
   (a) Education, Art and Culture
   (b) Medical, Family Planning, Public Health and Sanitation
   (c) Others

3. Economic Services
   (a) General Economic Services
   (b) Agriculture and Allied Services
(c) Industry and Mineral
(d) Water and Power Development
(e) Transport and Communication

4. Repayment of Loans to the Centre
5. Discharge of Internal Debt
6. Loans and Advances issued by the state government

GROSS FIXED PUBLIC CAPITAL FORMATION

Gross fixed capital formation refers to the gross additions to fixed assets (i.e. fixed capital formation) during the accounting period. Fixed assets comprise construction (including buildings, roads & bridges and other construction) and machinery and equipment (including plant & machinery and transport equipment).

Gross fixed public capital formation is composed of the gross fixed capital formation of the State and Central Government under
(1) Administrative department
(2) Departmental Commercial Undertakings
(3) Non-Departmental Commercial Undertakings and
(4) Local Bodies.
DATA SOURCE AND METHODOLOGY

The study is primarily based on secondary data and the sources are:

(a) Directorate of Economics and Statistics, Government of Assam, for collecting statistics regarding state income and government expenditure in Assam.
(b) Assam Government Budgets for statistics regarding government expenditure in Assam.
(c) Finance (Budget) Department, Government of Assam, Assam Secretariat, Dispur, Guwahati, for data regarding government expenditure in Assam.

In order to convert the nominal expenditure into real, the expenditure variables are deflated with respect to GSDP at factor cost deflator and expressed as percentage of GSDP. The real expenditure values at constant (1999-2000) prices removes the influence of price changes over the study period.

The study examines the impact of government expenditure on economic growth with the help of models by employing the Autoregressive Distributed Lag (ARDL) bounds testing approach to cointegration, proposed by Pesaran et al. (2001).
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