

**GLOBALIZATION, GOVERNMENT SIZE AND FEDERAL
FISCAL TRANSFERS**

Empirical Evidence from India

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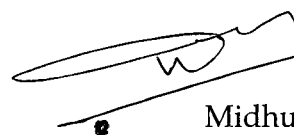
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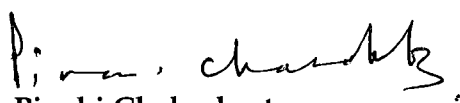
I hereby affirm that the works for this dissertation, "Globalization, Size of Government and Federal Fiscal Transfers: Empirical Evidence from India", being submitted as part of the requirements of the MPhil Programme in Applied Economics of the Jawaharlal Nehru University, was carried out entirely by myself. I also affirm that it was not part of any other programme of study and has not been submitted to any other University for the award of any Degree.

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ABSTRACT

Globalisation has distinct effects on the structure of public finance and the size of government as it influences the expenditure and revenue side of the budget. According to the neo-classical view, globalization affects the size of the government negatively; as with globalization, national government loses their monopoly of coercion since they find them in a situation of strategic interaction with their counterpart in deciding the fiscal policy. Another group of economists argued that international integration increases the size of government to mitigate international volatility of income through higher social security and welfare programmes. Broadly there are four channels through which globalization could effect Indian federalism. First, globalization can bring changes in the size and structure of government expenditure at central, state and local bodies. Second, globalization can make divergence in the provision of public expenditure across the states because there could be globalization induced increased in disparities in income and thereby tax bases across states. Third, globalization can bring about changes in the intergovernmental transfer system, which infact has been witnessed in increasing conditionality on the transfer of resources to states and also direct transfer of resources from the centre to local bodies to ensure efficiency in financial devolution. The present study is confined to these issues. The study found that globalization has reduced the size of central government and thereby transfers from centre to states during the period of reform. It is also observed that there has been an increase in the disparity in own revenues and thereby the inequality in public expenditure across the states. Another reason for growing inequality in public expenditure is less progressive distribution of resources from center to states. The study concludes that the transfer system should address the growing inequality in public expenditure, especially the inequality in developmental expenditure and own revenue collections, across the States while making devolution. Also there is a need to have policies to address the growing spatial inequality during the post-reform period.

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Chapter 1

INTRODUCTION

Globalization has distinct effects on the structure of public finance and the size of government as it influences the expenditure and revenue side of the budget (Schulze and Ursprung, 1999). According to the neo-classical view, globalization affects the size of the government negatively; as with globalization, national government loses their monopoly of coercion since they find them in a situation of strategic interaction with their counterpart in deciding the fiscal policy. Mobility of capital and labour with ease makes it increasingly difficult for the government to generate revenue through taxation during globalization. As observed by Oates (1972), to compete with other states for international investors and to prevent capital flight, state will lower tax rate. Just as firms, in the era of globalization, governments are in competition to attract mobile factors and to provide conditions favourable for making domestic goods competitive in the global market. The extent of this competition depends on the degree of international mobility of goods and factors. Another group of economists argue that globalization demands higher government spending in the form of social security and transfer programmes. It is argued that international integration increases the size of government to mitigate international volatility of income through higher social security and welfare programmes (Garrat 1998, Rodrik 1998, Rudra 2002 and Cameron 1978). The literature also argue that globalization tend to change the composition of public expenditure.

As a part of globalization, Government of India introduced several measures to restructure the public finance. This includes reforms in tax system through large-scale reforms in both direct and indirect taxes, expenditure reforms, debt restructuring, strengthening of local bodies, disinvestment of public enterprises, changes in inter-government transfer system and reprioritizing social welfare programmes. Globalization has also facilitated free movement of private and foreign capital within the country. Broadly the macroeconomic effects of globalization process on the federal structure may be twofold. (i) a plausible change

in the size and composition of expenditure at all levels of governments and (ii), an increase in inter-state inequality in the per-capita income and also in the provision of publicly provided services. Globalization can also have adverse impact on the vertical and horizontal transfers if higher levels of government suffer from revenue loss due to globalization and in turn reduce the volume of transfer to lower levels of government.

This study examines the effect of globalization on the size of the central government in India and in turn on the federal fiscal transfer mechanism during the era of globalization.

1.1: Theoretical Issues: The Efficiency and Compensation Effects

Schulze and Ursprung (1999) identified that the entire debate on the effects of globalization on government size can be dichotomized into *efficiency effects* and *compensation effects*. The efficiency effect mainly captures the influence of globalization on the revenue side of government budget as in a liberalised regime, cost of higher tax not only leads to the reduction in private income but also loss in capital investment. When the government levy tax on capital, it reduces the private income. The marginal social benefit of the taxation is the benefit derived from the provision of additional public goods. In a liberalised regime, social cost of increasing tax rate not only reduces private income but also reduces capital inflow and thereby national income. This implies that for a single jurisdiction, social cost of increasing tax rate is higher if capital can flow out of the country and therefore the optimal tax rate is lower than if capital was locked in the country. The striking result of tax competition literature is that public goods are underprovided (Oates, 1972). Tax competition also results in shifting tax burden to those activities that cannot escape from the tax (Rudra, 2002). On theoretical ground, we would expect increased revenue from labour taxation and reduced rate for corporate income tax¹. Conversely, low tax rate attract mobile factors such as capital and government will therefore try to undercut each other in order to attract these mobile factors, which

¹As capital is more mobile than labour in globalized economy it is expected that tax rate will be higher on immobile factors like labour, land etc and tax rate will be less on highly mobile factors like capital.

may lead to 'race to bottom' phenomenon. Thus, increase in tax rate in a jurisdiction has positive externality in other jurisdictions. The reason is that relatively high tax rate on mobile factors will increase the incentive for taxed factor to emigrate and thereby erode the tax base. It has been claimed that capital mobility renders the tax base completely foot loose and thereby seriously reduce the nation states ability to conduct redistribution policies (Kurzer, 1993). Therefore public goods are underprovided. In sum, the efficiency effect of market integration would reduce the size of government due to lower tax mobilization.

Also, the liberalization of nation's external account and the regulation governing financial transition can lead to revenue shortfalls. It is observed by Grunberg (1998) that financial liberalization has created a revenue shortfall because, in course of regulating interest rates or steering money and credit to various sectors of the economy, governments occasionally make a profit, or is able to borrow at subsidized rate of interest. Another forgone source of revenue originates from capital controls in the form of multiple exchange rates. If the governments are net sellers of foreign exchange, the sale of foreign exchange at higher than market rate used to be a source of revenue for them. Liberalization and devaluation often lead to a unification of exchange rates removing yet other source of revenue (Reisen, 1990). The efficiency effect may also result from structural adjustment measures. Reduction in the trade tariff was a part of broader structural adjustment measures aimed at encouraging the competitiveness of individual countries and at reducing rent-seeking measures. Foreign trade taxes have always been a privileged revenue head device for developing countries. They account for one-third of tax revenue² (Grunberg, 1998).

A compensation effect on the other hand comes through the expenditure side of government budget. The contention is that demand for public spending, especially demand for transfer programmes varies positively with globalization. Globalization induced increase in unemployment and income volatility increase the demand for publicly sponsored goods and services such as social insurance,

² The reason is that trade taxes are easier to implement and do not require complex administrative system. As trade tax entail lower administrative cost, they do lead to welfare losses larger than other form of taxes.

education, sanitation, urban and rural infrastructure. Also, increased demand for social welfare programme to mitigate external risk (Rodrik 1998, Garrett 1998) increase government expenditure programme during globalization. Hicks and Swank (1997) suggest that electoral turn out, difference in the strength and ideologies of parties and political institution shape the social welfare effort of the government. This would suggest that unemployment; income volatility, external risk and political factors like unionization of labour will induce the growth of government in open economy. It has also been observed that globalization increases the disparity in income among states in federal country. Singh and Srinivasan (2002) argued that extensive privatization programme has decreased federal government ability to address disparities across the regions. In Indian concept also, it has been observed that spatial inequality has increased during the post reform period.

1.2: Review of Empirical Studies

Literature on liberalisation and government size could be dichotomised into the studies, which use partisan or institutional³ view and studies, which use non-partisan non-political⁴ view. Garrett (1995, 1998), Cusack (1997), Swank (1997), Quinn (1997), Rodrik (1997 and 1998), Alesina and Wacziarg (1998), Cameron (1978), Sameti (2004), Hicks and Swank (1992), Ram (2005) and Rudra (2002) tried to investigate whether global market integration has had an impact on public spending behaviour. These studies employed econometric methods to analyse the impact of liberalisation on government size. The study by Garrett (1995), Cusack (1997), Swank (1997), Rudra (2002), Hicks and Swank (1992) have adopted partisan or institutional focus, where as Quinn (1997), Rodrik (1997 and 1998) and Garrett (1998), Ram (2005), Alesina and Wacziarg (1998), Cameron (1978) Sameti (2004) adopted a non-partisan and non-political view.

A number of endogenous variables are used in the multiple regression models, which tried to find out the impact of liberalisation on public spending. Most of the studies adopted government spending as a share of GDP over time as

³ political-economic model which include ideological determinants

⁴ political - economic model in which ideology does not play any role

dependent variable. Rudra (2002) used welfare expenditure as the indicator of government size and measured the impact of liberalisation on welfare programmes. Most of the studies used trade integration or capital integration or both as the measure of liberalisation. Trade integration variable is measured as the share of import plus export in GDP. Capital market integration is captured by using capital flows or number of government restriction imposed by government on cross-broader capital flows. We are dealing with both non- partisan or non-political view of globalization and size of government.

Rodrik (1997) used a panel data approach for a set of OECD countries to identify the negative influence of trade and capital market integration on public spending. The estimated coefficient included the efficiency effect of trade integration, which became stronger as the financial markets are liberalised. Rodrik (1998) included more than 100 countries, illustrate that openness exerts strongest influence on government consumption in economies and these economies are subject to greatest amount of external risk. He used two measures of external risk - fluctuation in the external terms of trade and product concentration of export. The study of Rodrik also includes terms of trade as explanatory variable. The regressions demonstrate that trade volatility and openness have a highly significant positive impact on government consumption. Governments have reduced the exposure to risk by increasing the share of government expenditure in total expenditure in the economy.

Cameron (1978) showed that the best single predictor of increase in tax revenue between 1960 and 1975 in OECD countries was the openness of the economies in 1960, with correlation coefficient of 0.78. By way of explanation, Cameron argued that more open economies have higher rate of industrial concentration, which tend to foster higher unionization, greater scope for higher bargaining and stronger labour confederation. These in turn result in larger demand for government transfer - social security, pension, unemployment insurance, job training and so forth-, which mitigate external risk. Cameron limited his study to 18 OECD countries, and his explanation for funding is too specific. Taken together, these studies substantially support the compensation hypothesis.

Garrett (1995) developed left labour power index as independent variable. Cusack (1997) used political stance of the electorate and difference in ideology between electorate and government as independent variable. Cusack (1997) obtained significant negative impact of capital market integration on government growth. He also finds that government growth does depend on the ideological stance of voters at large. Garrett (1995) also finds some evidence for negative impact of capital market and trade market integration on level of public spending. The study by Swank (1997) shows capital market integration does not have a significant influence on government growth, whereas trade integration has a significant positive impact on government size. Another study by Rodrik (1997) for a set of OECD countries using panel data approach identified the negative influence of trade and capital market integration on public spending. The estimated coefficient showed that efficiency effect of trade integration became stronger as financial market are liberalised. Rudra (2002) also demonstrates that globalization leads to lower social spending in LDCs because low skilled workers have limited political leverage and it is difficult to mobilize them because they have little bargaining power in the system due to low education, without assured income and job security. Existence of surplus labour force in the LDCs, focus on gaining employment rather than on lobbying for social benefit in the era of globalization. ?

Does this mean that the two variables are inversely related?

This only argues for no increase in govt. exp. why does the fall occur?

1.3: Globalization and Federal Structure in India

To start with, one need to emphasize that the structure of fiscal arrangement in India was formed at the time when its economy was much less market oriented than today, with Centre having a large role in regulation, administration and planning of the economy (Ehtisham and Crag, 1997). The economic globalization has brought about several changes in the structure of federalism⁵. Broadly there are four channels through which globalization could be affects Indian federalism First, globalization can bring change in the size and structure of government expenditure at central, state and local bodies. Second, globalization can make divergence in the provision of public expenditure across the states. Third, globalization brings about changes in the intergovernmental transfer system, which in fact has been witnessed in increasing conditionality on the transfer of resources to states and also direct transfer of resources from the centre to local bodies to ensure efficiency in financial

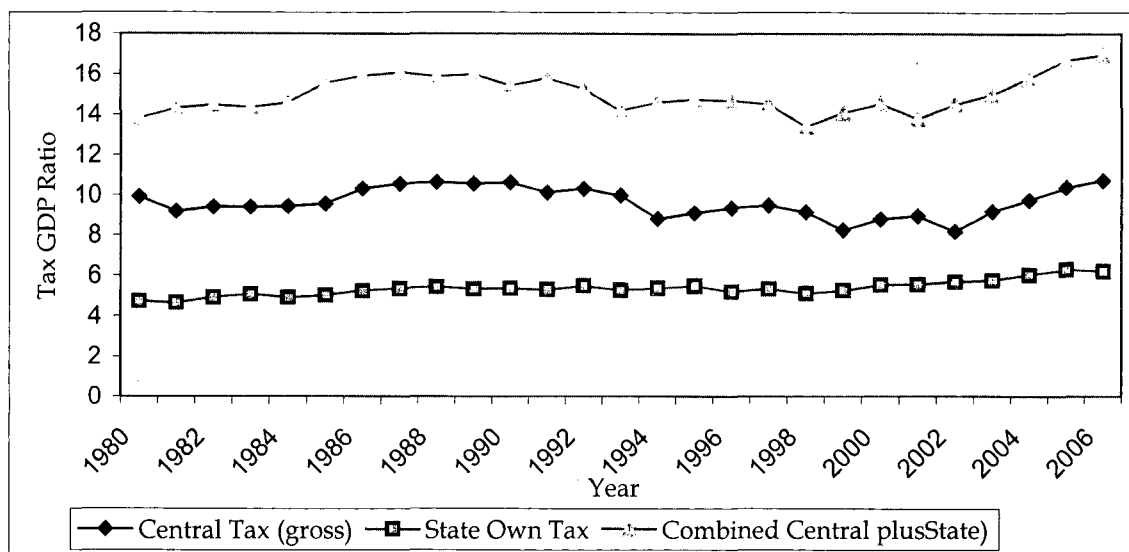
⁵ Discussed in detail in the second chapter.

devolution. Fourth, consequent to these changes in financial devolution, there is change in the capacity of local bodies to deliver public services. Singh and Srinivasan (2002) recognized that in India all layers of government are simultaneously interacting with foreign government and corporations in recent years enhancing the level of competition, and in turn is limiting their role to carry out an independent fiscal policy. The economic reforms of 1991 which substantially loosened the central government control of foreign, domestic and corporate investment, allowed the state government to become more autonomous actors in economic policy (Sinha 2004, Singh 2007). Regulatory and permission issues for the private sector are now often shifted to the state level rather at the center (Sinha, 2004). The reforms of 1991 gave the government more freedom to make policies independently. In particular, state governments can now provide incentive to foreign capital to enter their jurisdictions and also can have direct market borrowing (Wallack and Srinivasan 2003, Srinivasan 2004).

Based on the theoretical literature, we can conceptualize the entire gamut of fiscal reforms into efficiency and compensation effects. The efficiency measures include cut in customs duty, replacement of excise duty (and states sales tax by CENVAT) and, ^{by} states level VAT. Efficiency measure also includes disinvestment of public sector enterprises and debt restructuring programmes and increased conditionality on transfer from Center to States. In other words, globalization reassigned revenue and expenditure role of both central and state governments.

Some of the changes in the tax in the last two decades are well known; reduction in tariff rate, reduction in tax rate coupled with attempt to broaden the tax base, a gradual movement from excise duty and sales tax to VAT at both Central and State level, and the reforms to avoid cascading and very high and variable effective rate of indirect taxation. The reduction in trade tariff in India since 1991 have resulted in an uncompensated loss in aggregate tax revenue, which had accounted to two per cent of GDP by 2001-02 (Rajaraman, 2004). State sales tax and exise duties also showed proportionate decline, so that the overall tax GDP ratio has declined by almost two percent in 1990s (Rao, 2000). A part of decline in state sales tax and exise duty is attributed to poor performance of manufacturing sector during the 1990s. The figure 4.1 shows that tax GDP ratio of Central, State and Combined (Central and State) was declined during 1990s.

Figure: 1.1: Tax to GDP Ratio

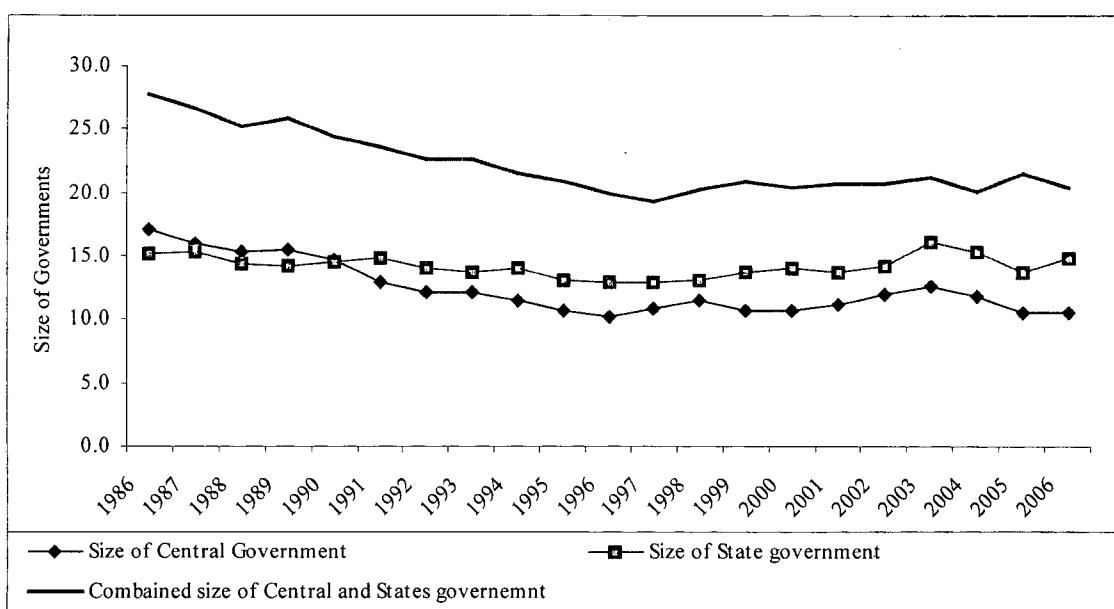


The recent Finance Commissions (9th, 10th, 11th and 12th) as well introduced a number of changes in the system of transfer of resources from centre to states. The Ninth Finance Commission has adopted normative approach to project the revenue and expenditure of each State that reflects in some sense the revenue-effort and expenditure needs of the State better than the gap filling approach. Secondly, Tenth Finance Commission set out alternative schemes of devolution so that state can benefit from the aggregate revenue buoyancy of central taxes through global pool sharing. Thirdly, since the 1990s the efficiency factors such as tax effort and expenditure discipline have been given higher weights in the distribution formulas by the Finance Commission. Fourthly Eleventh Commission was asked to make recommendation regarding the restructuring of the finance of Centre and States. Twelfth Finance Commission went further and brought about a debt consolidation and write-off schemes linked to enactment of Fiscal Responsibility Act (FRA).

If we look at the expenditure side during the period of openness, as compensation measure, governments increased the expenditure on social welfare schemes. Government expenditure on social and welfare services including rural development have grown during 1995-96 to 2006-07. Public pension payment rose from 1.1 per cent to 2.0 percent of GDP between 1990 and 2005 (GOI 2004, 2005 and 2006). The social welfare expenditure as percent of total expenditure has also increased because retrenchment of this expenditure is risky (GOI 2005, 2006 and

2007). The Central government introduced several social and welfare schemes in the form of direct transfer from the Centre to local bodies and various other implementing agencies. These programmes are Sarva Shiksha Abhiyan, National Rural Employment Guarantee schemes, Bharat Nirman Yojana, National Rural Health Mission programmes with huge amount of allocation in the budget. According to Garg (2006), 23.29 per cent of gross budgetary support bypasses the State budget and goes directly to the district authorities and other implementing agencies. As evident from figure 1.2 the size of government in terms of government expenditure to GDP ratio declined sharply during 1990s, though it shows moderate increase from early 2000. This trend is same for the Centre, State government and taken together.

Fig1.2: the Size of Central, State and Combined (Central and State) Governments.



1.4: Conceptual Framework

The crucial question here is: ^{did the} whether efficiency measures reduced ~~ed~~ the revenue generating capacity and thereby the size of the government, and if so what ^{was} its effect on government expenditure? The conventional system also suggests ^s that less intervention of the state can ^{facilitate} ~~make sure~~ the free play of market forces and ensure efficiency in the economy. ~~On~~ ^{Contrary} to this, the literature provides ^{the} evidence for huge demand for public expenditure in ^{the} form of social and welfare programmes and compensation to losers of globalization. One possible positive

effect of lower tax rate may be, ^{that} it helps to improve the tax base of the economy, ^{thereby} ~~by the rise in~~ ^{raising} government revenue. But lower tax rate, if not followed by increase in tax base and consequent increase in revenue, ~~it~~ may result in reduction in government expenditure. Reduction in revenue along rule based fiscal control imposes restrictions on the government by restricting borrowing power, which can also reduce the size of government, both at central and State level.

Secondly, we can expect a change in the expenditure pattern of the government mainly in three ways. First, in the globalised regime, one would expect a shift in public goods provision, which increasingly benefits mobile factors. Government spends more on public infrastructure to attract mobile capital and on public programmes like education and health to develop highly productive human capital. Second, globalization can change the demand for voluntary redistribution. If the gain from liberalization comes at the cost of increased economic uncertainty, social insurance motive may well give rise to an increased demand for redistribution from gainers to losers of globalization. Third, it is also expected that government will increase expenditure towards those goods that are ^{the} in nature of public and merit goods where the market may fail to make optimal investment. To sum up, we can say that globalization can change the pattern of expenditure at central and state levels.

^{the} In Indian context, the influence of globalization on State governments can be in two ways; one directly influencing the revenue raising capacity of the states, and two, through the changes in nature and quantum of transfer from Centre to states. Various studies have found that in recent years performance of state^s is diverging with relatively developed state^s ^{ing} growing at a faster rate (Rao 1999, Nayyar 2008 and Singh and Bhandari 2003). It is observed that growth in globalised economy is often highly unbalanced as some states are able to take advantages of foreign markets and investments more rapidly than others. The States having higher growth in GSDP can have greater scope to raise revenue. On the other hand, States having lower GSDP growth could have low capacity to raise revenue. Therefore the difference in per capita income growth of the States will make further difference in own revenue across the states and thereby the per capita expenditure among them. ~~states~~, unless the transfer system becomes sufficiently progressive to take care of this widening difference in revenue raising capacity due to globalization.

If the transfer system is not progressive enough, it can increase inequality in public expenditure across states. It is well established in the literature that Central-state transfer has failed to achieve the desired objective of horizontal equity (Gulati 1988, Rao and Singh 2002 and Singh and Vasishtha 2004, Chakraborty 2003). However, recently conditional transfer has increased to ensure efficiency (GOI) in the allocation of resources, which can again increase the inequality in public expenditure across the states. The decline in transfer consequent to the decline in central government's ability to raise revenue, will affect those states, which are depending more on transfer from the center. It can also lead to increase in inequality in the public service provision across the states. Changes in inequality are also linked to the differences in domestic policies, particularly difference in the policies that affect the states' ability to take part in the global economy. Quality of infrastructure appears to be the most robust of these policy factors (Wallack and Srinivasan 2003).

why?

On the demand side, the compensation policies by the States such as social and welfare expenditure demands higher size of government at Central and State level. Globalization demands higher social security programmes and compensation measures for losers of globalization. As mentioned earlier during the period of openness, as compensation measure, Central government has increased the expenditure on social welfare schemes. The Central government introduced these schemes in the form of direct transfer from the Centre to local bodies and district level implementing agencies bypassing the State budget.

In this context, it is need to be highlighted that in India most of the social welfare expenditures are the responsibility of sub-national governments, despite the spillover effects across the regions. The Central government is entering in a big way in the social sector spending, bypassing state, which can change the structure of Indian federalism in the years to come. In this backdrop, the study examines the impact of globalization on size of Central and State government and analyse to what extent the central transfer to states are addressing the issue of vertical and horizontal equity in the era of globalization.

1.5: Objective of the Study

The following objectives are discussed through out this endeavor

- i) To measure the effects of globalization on the size of Central government and thereby transfer from center to states.
- ii) To empirically investigate the disparity in public expenditure across sub-national governments in India in the globalized regime.
- iii) To examine whether the federal transfers are equalizing in recent years.

1.6: Data and Methodology

The study is based on the secondary data. Most of the secondary information is collected from Reserve Bank of India publications titled, "Hand Book of Statistics on State Finance" and "Hand Book of Statistics on Indian Economy". The study has also made use of Indian Public Finance Statistics, Union Budget Documents and National Account Statistics published by Central Statistical Organization. Study uses exploratory data analysis and also applied appropriate statistical and econometric tools to analyze the stated objectives of the thesis.

1.7: Chapter Scheme

Apart from the Introduction, the thesis is organized into five chapters. Chapter II outlines the evolution of federalism in India and what are the changes that are brought about by reforms during 1990s. Chapter III undertakes a detailed analysis of state finance issues related to federal transfers and the level of vertical and horizontal imbalance. Chapter IV discusses the effect of globalization on the size of the government and thereby on transfer from center to states. Chapter V discusses the disparity in the public expenditure across the states, the underlying causes and to what extent present inter-governmental transfer system is able to address this question. Chapter VI summarizes the findings of the study and draw conclusions.

Chapter II

FEDERALISM IN INDIA: AN EVOLUTION

To understand how globalization policies changed the structure of federalism in India, we first need to review the literature on Indian federalism during pre and post globalization period. In this chapter we will review the selected literature, which have analyzed the different features of Indian federalism. It is argued that globalization policies can influence fiscal federalism in alternative ways through changes in revenue, expenditure and borrowing policies of Centre and States and also by influencing inter-governmental transfer mechanisms. Intergovernmental transfer mechanism in India has undergone various changes in the last decade and a half; the primary focus of such change was the introduction of conditionalities in transfers to ensure fiscal discipline and also to ensure efficiency in the allocation of resources. Therefore the critical review of literature would help us to know the evolved structure of federalism in India.

The chapter is organized into five sections. Section 2.1 deals with federalism in pre-independence period, while section 2.2 examines the central bias in Indian federalism. Section 2.3 examines the transfer system, while section 2.4 reviews the impact of reforms on federalism. Section 2.5 provides a summary of the reviews.

2.1: Federalism in the Pre-independence Period

The system of federalism in India has a long history behind it, drawing back at least to 1870 (Singh, 2006). With the take over by the British Crown from the East India Company in 1858, a highly centralized system came into being. The Governor General in Council retained complete control over provincial revenues as well as expenditure. The provincial governments were completely dependent on allotment by the central government for the maintenance of their administration (Quyam, 1976 and Kumar, 1982). It was soon realized that decentralization was necessary for a country of sub-national dominions like India, having huge diversities in preference for public services.

The Government of India Act 1919 based on Montague- Chelmsford Report devolved some functions to provinces and normally restricted the power of Centre over the matter assigned to province. The Act of 1935 provided for distribution of legislative jurisdiction with a threefold division of powers into federal, provincial and concurrent lists. The Act loosened the power of Government of India over the states (Nayak, 1999). Subsequent to these Act, British control over India essentially concentrated on matters concerning defense and currency, leaving province to manage their affairs (Kumar, 1982 and Lakdawala 1967). The most important feature of Government of India Act, 1919 is that it sought to devolve the authority to province, paving way for federalism. The Centre and Province were allotted certain broad heads of revenue; former had customs, income tax, posts, salt and railways, and latter had jurisdiction over land tax, irrigation and stamps. The Government of India Act of 1935 carried the principle of federalism further. No radical change was made in the division of sources of revenue between the Centre and States. Instead it was decided that the proceeds of certain central taxes like income tax and export duties could be divided between the Centre and the States, with rules of division being left with the Centre. The framers of Indian Constitution relied heavily on Government of India Act of 1935 for new Constitutional framework. The Constitution also incorporated features of central bias that were not present in earlier British legislation through assigning residual power with the Centre and central ability to impinge severely on the States in special circumstances (Singh, 2006). The Constitution has given the Centre an edge over the States in case of conflict existing between subjects listed in the concurrent lists.

2.2: Central Bias in Indian Federalism

A convenient starting point for the survey of research on Indian federalism is to ask whether the existing system of fiscal federalism in India is optimal. There is an influential view that the imbalance between the revenue raising powers and spending obligations of the States that has characterized the present fiscal arrangement had its origin in the Government of India 1935 Act, which was to strengthen the domination of the Centre in its relation with provincial governments

(Gulati and George, 1988). There is virtual unanimity among the economists that Indian Constitution imparts a strong centripetal bias (Chanda 1965, Venkataraman, 1968 and Mitra, 1987). The important aspect of centripetal bias is seen in the distribution of central power between the Centre and States. It has also been pointed out that Central government rather than merely performing the role of mediator between Centre and States look after the responsibility of defense, external affairs, certain strategic industry, major network of transportation and general economic coordination, Centre undertakes many other allocative functions (Mitra, 1987). Central government's power to borrow unlimited sums particularly from the Reserve Bank of India and limitation of State power to borrow even from market when they are indebted to the Centre has tended to cause very high degree of centralization in the capacity to raise financial resources (Gulati, 1988, Rao and Chelliah, 1991). Even though the borrowing conditions of state governments are changed recently, those state governments that are indebted with central government are not able to raise market loan without prior permission from the central government (Ghosh, 2005).

Not only that the original distribution of function exhibits a centripetal bias, but also over the years, the actual operation of Indian federalism seems to have caused continuous increase in the degree of centralisation. First, over the years the Centre has entered into the fields coming into the States and converted a large number of States subjects into virtually concurrent (Gulati, 1988). Secondly, the planning processes adopted to hasten the pace of development, has brought enormous centralization in resource allocation (GOI, 1968). Acquiring a large degree of control over State expenditures by expanding the centrally sponsored scheme and reverse flow of resources from the State to Centre in form of repayment of loan, interest on loans and investment in treasury bills has also been pointed out as yet another important instance of increasing centralism (Garg, 2006 and Isaac and Ramakumar, 2006).

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Mitra (1987) asserts that centralization has resulted in deceleration in the rate of growth of the economy and acceleration in income inequalities. The theory argues that the decentralisation can lead to greater economic growth. A

decentralized form of government often promise increasing economic efficiency by providing a range of output of certain public goods that satisfies the taste of differing group of consumers. Individual local governments are presumably much closer to the people and geography of their respective jurisdictions; they possess knowledge of both local preference and cost condition and can more rapidly respond to the needs and preference of the citizens living in their jurisdictions (Oates, 1999 and Hayek, 1945). Therefore, Oates (1999) argues that given the population size, the welfare gain from the decentralized provision of particular public goods becomes greater, as the diversity of individual demand within the country as a whole increase. Consequently, people will choose a jurisdiction that provides the fiscal package best suited for their tastes by “voting with their feet” (Tiebout, 1956).

The economic consequences of the alleged over centralization in India, a country with huge disparity in terms of tastes for public goods, have not been subjected to any detailed analysis. However, centralisation is necessary for achieving macroeconomic stabilization. Theory asserts that the central government should have basic responsibility for the macroeconomic stabilization function, income distribution in the form of assistance to poor and providing certain public goods that influence significantly the welfare of all members of the society (Oates, 1977). There are studies, which argue that in an economy with significant inter-regional disparities in the level of living, higher degree of centralization is necessary to ensure balanced economic growth and keep the country united (Chelliah, 1981 and Nayak, 1999).

The centralisation has resulted in imbalance in the distribution of resources and functions between the Centre and States. The imbalance has been to an extent rectified by the Constitution in two-fold ways: first, certain duties and taxes have to be shared by the Centre and States. Secondly under Article 275 grants-in-aid have to be given by the Centre to such States that are ‘in need of assistance’. The Constitution provides for an independent Finance Commission to make recommendation to the President in regard to the distribution of shareable tax and the payment of grants-in-aid to the States. With the advent of planning, the

devolution by Finance Commission has been overshadowed by the large grants and loans given by the Centre to the States on the recommendations of the Planning Commission.

It is also important to look at the fiscal role of Central and State government while analyzing fiscal federalism. The primary responsibility for redistribution should lie with the central government, in Indian context, States, too has taken some redistribution function as important objective of their tax policies (Rao and Chelliah, 1991). An inherent problem faced by all the federation is the inadequacy of the revenue to perform the constitutionally assigned function at ~~central and~~ sub-central levels of government. Given that the primary responsibility for redistribution and stabilization assigned with the central government, wide inter-state disparities also gives the rationale for greater centralization in revenue (Rao and Chelliah, 1991). However the pursuit of redistributive role at the central level dictates the assignment of more progressive taxes to the Centre and a more progressive taxation should have higher elasticity with respect to real incomes. On the other hand, major responsibilities of providing social and economic services are assigned to the States. As these services are known to have high-income elasticity of demand, the gap between own resources and need has been continuously increasing (Rao and Chelliah, 1991). Apart from the centralization of power assigned by the Constitution, there are several policies, which increase the centralization. The important among them are re-defining of income tax to exclude corporate tax from compulsory sharable proceedings (Gulati, 1988) and also the less buoyant tax assigned to the states (Rao and Chelliah, 1991). The decline of transfer from Centre to states during nineties also increased the extent of vertical imbalance (Chakraborty, 2003). However during the period of reforms, a tax-specific buoyancy aspect of devolution is not valid, as the fixed transfer is no longer from the specific-taxes rather the devolution is from the gross pool of taxes. The increase in revenue capacity at the State level not keeping pace with growing expenditure needs also enhance the vertical imbalance in India (Rao and Singh, 2005).

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Another equally important problem in a federation is that the imbalance in revenue is not uniform across the States. This problem of fiscal imbalance has to be

attributed to the existence of two important sources of fiscal disadvantages, namely, difference in the capacity to raise revenue and variation in the unit cost of providing public services across the States (Oates, 1977). Revenue imbalance can be either due to difference in fiscal capacity or effort. Similarly, expenditure difference in the State may be due to difference in the quantity or quality of services provided or difference in the unit cost. Bharadwaj (1982) argued that in the Indian context, difference in revenue capacity is mainly attributed to the distortion in the pattern of investment made to serve the colonial interest in the pre-independent era. Various studies have shown that major instrument of regional policies have failed to arrest the growing regional disparities in India (George, 1998, Gulati, 1977, Chakraborty, 2003 and Rao and Singh, 2005). The existence of fiscal imbalance may not be a cause for concern if there exists an efficient and equitable mechanism for transfer to offset this imbalance. However, that does not seem to be happening in practice and problem got further compounded due to multiple channels of transfers having multiple objectives.

2.3 Transfer of Resources from Centre to States

Broadly there are three channels of resource transfer from the Centre to States, viz., Finance Commission, Planning Commission and Various Central Government Ministries.

2.3.1: Finance Commission

Under Article 280 of the Constitution, the President of India appoints Finance Commission every five year or earlier to make recommendations on:

i) The distribution between the Union and States, the net proceeds of taxes which are to be or may be divided between them and the allocation between the States of the shares of such proceeds.

ii) The principle that should govern the grants-in-aid of the of the revenue of the States, out of the Consolidated Fund of India and sum to be paid to the States which are in needs of assistance by way of grants-in-aid of their revenue under Article 275 of the Constitution.

So far Twelve Finance Commissions have made recommendations and the government has accepted it. Yet the working of the commissions, the approach and the methodology adopted by them in formulating their recommendations has come in for severe criticisms. The main topics for criticisms are a) those relating to which restricts the scope of Finance Commission b) those on approach and methodology adopted by the Finance Commission. It has been pointed out that the Terms of Reference restricted the Finance Commission's role to examine non-plan revenue budget of the States, particularly since The Third Finance Commission (Chelliah, 1981 and Gulati, 1973). However, the Constitution does not place any such limitation on the scope of Finance Commission.

An important feature of tax devolution recommended by the Finance Commission has been that, criteria adopted for distributing grants are different from that of the principle adopted for giving tax, while nowhere it is made clear that the economic objectives of two instruments are different (Rao, 1987). The objective of devolution of tax share and grants-in-aid from the centre to state is to provide same level of public services across the states irrespective of difference in revenue mobilizing capacity and cost of providing public services. But formula used for the distribution of grants and tax share are different. The tax devolution is recommended on the basis of general economic indicators, where as grants-in-aid are given to offset the residuary fiscal disadvantages of the States as quantified by the Commissions. The criteria adopted by the Commissions have also been a matter of controversy. The important issues discussed on the criteria for tax devolution were a) the relevance of contribution factor in distributing of the share of the income tax b) the relevance and appropriate indicator of criterion on which tax devolution was made. Almost all Finance Commissions prior to Ninth Finance Commission have assigned 10-20 per cent weight to the contribution factor in distributing the proceeds from income tax. Rao and Chelliah (1991) argued that Finance Commission has not explained rationale for the assigned weight to contribution factor in terms of either economic or legal terms. Further indicators of tax devolution are population, inverse per capita income; distance of Per capita income from highest income State multiplied by population, index of backwardness, area and poverty ratio, tax effort and fiscal discipline. Recent

Finance Commissions¹ used tax effort and fiscal discipline also as the criteria for tax devolution. On the basis of criteria adopted by the Finance commissions, we are dividing the Finance Commissions into three phases. In the first phase, significant weightage was given to population (table 2.1). In the second phase, Finance Commissions reduced the weightage given to population and introduced equalizing indicators such as socio-economic backwardness, inverse per capita income multiplied by population and distance of per capita income from highest income State multiplied by population (2.2). In the third phase, Finance Commissions emphasize on efficiency through introducing fiscal discipline and tax effort as indicators of tax devolution, although distance of income remained the pre-dominant criteria of devolution (2.3).

Phase I

Table 2.1: Finance Commissions' Criteria for Tax Devolution

| Finance Commissions | Income Tax Sharing (Base of Distribution) | Excise Duty Sharing (Base of Distribution) |
|---------------------|---|---|
| 1 st | 80 % Population, 20 % Collection | 100 % Population |
| 2 nd | 90 % Population, 10 % Collection | 90 % Population, 10 % Discretionary adjustment |
| 3 rd | 80 % Population, 20 % Collection | Population Major factor, (weight unspecified), Financial Weakness and Economic Backwardness (weight unspecified). |
| 4 th | 80 % Population, 20 % Collection | 80 % Population, 20 % Economic and social backwardness |
| 5 th | 90 % Population, 10 % Assessment | 90 % Population, 10 % Economic and social backwardness |
| 6 th | 90 % Population, 10 % Assessment | 75 % Population, 25 % Relative economic and Social backwardness. |
| 7 th | 80 % Population, 20 % Assessment | 25 % Population (1971), 25 % Inverse Per capita SDP, 25 % to Poor in Total State Population, 25 % Formula of Revenue equalization as worked out by the FC |

Source: Finance Commission Reports

¹ 10th, 11th and 12th Finance Commissions.

Phase II

Table 2.2: Finance Commissions' Criteria for Tax Devolution

| Finance Commissions | Income Tax Sharing (Base of distribution) | Excise Duty Sharing (Base of distribution) |
|---------------------|---|---|
| 8 th | 10 % on the basis of assessment and 90 % of divisible pool with following criteria, a) 25 % population, b) 25 % Inverse Per Capita income, c) 50 % Distance of Per capita income From highest income State multiplied by population, | 25 % Population, 25 % inverse income multiplied by population, 50 % on Distance of per capita income from highest income State multiplied by population |
| 9 th | 10 % contribution, 45 distance of per capita income from highest income State multiplied by population, 22.5 % population, 11.25 % composite index of backwardness. 11.25 inverse per capita income multiplied by the state population. | 25 % Population, 12.4 % Income Adjusted Total Population (IATP), 12.5 % Index of Backwardness, 33.5 % of Distance, 16.5 % to Deficit states. |

Source: Finance Commission Reports

Phase III

Table 2.3: Finance Commissions' Criteria for Tax Devolution

| Finance Commissions | Base of Distribution | | | | | |
|---------------------|----------------------|----------|------|----------------|------------|-------------------|
| | Population | Distance | Area | Infrastructure | Tax Effort | Fiscal Discipline |
| 10 th | 20 | 60 | 5 | 5 | 10 | - |
| 11 th | 10 | 62.5 | 7.5 | 7.5 | 5 | 7.5 |
| 12 th | 25 | 50 | 10 | - | 7.5 | 7.5 |

Source: Finance Commission Reports

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The predominant view is that, in view of glaring disparities in the provision of public services among the States, use of population as the only basis is clearly inadequate (Satry 1966, Lakdawala 1967). It has been a common policy of almost all Finance Commissions to give over weightage to population even though it is true that population is an indicator of need. Rao (1984) argued that undue weight given to population is not correct. Table 2.1 shows that most of the Finance Commissions had given undue weightage to population and backwardness and low fiscal potential of the states has not been accorded due weightage.

Yet another area of criticism is with regard to the appropriateness indicator of backwardness used in the tax devolution formula. It has been argued that the criteria of backwardness used by the Finance Commission should be general rather than specific (Rao, 1973). Thus composite index of backwardness used by fourth and fifth Finance Commissions or per capita SDP employed by the subsequent commissions either in inverse or in the distance form, did not invite much criticism (Rao and Chelliah, 1991).

However, the use of relative level of poverty or poverty ratio in tax devolution formula employed by the seventh Finance Commission has been severely criticized. Dandekar (1979) criticized the poverty criteria mainly on the ground that the poverty line employed was not State specific and the adjustment for consumer price differences took into account only the difference in growth in price and not the difference in price levels themselves. Hashim and Sharma (1988) pointed out that it is necessary to take into account inter-state difference in a) population structure b) activity composition c) climatic condition c) difference in price structure and their trends, while using poverty as an indicator of tax devolution. Among these factors a, b and c have vital bearing on calorie requirements and the minimum basket to meet the requirements; while the price differences indicate the monetary equivalent of the poverty line. Because of these limitations, the poverty figures as a criterion in the tax devolution formula by the Seventh Finance Commission evoked sharp comments from Dandekar (1979). The justification for introducing poverty ratio is also questionable due to the fact that relative poverty factor is implicitly there in Income Adjusted Total Population (IATP). Group of economists argue that the criteria for tax devolution lack incentive for the states to reduce fiscal profligacy or increase tax effort (Rao 2004, Rao and Singh, 2005). Recently Finance Commissions introduced tax effort and fiscal discipline as criteria for tax devolution to enhance efficiency.

Grants-in-aid revenue has been traditionally recommended by the Finance Commission for two purposes; first, to fill the estimated post- devolution gaps in the non plan revenue account of the States and second, to enhance the level of specified public services in the States where these services are deficient. The

Finance Commission adopted gap-filling approach to distribute the net proceeds. Finance Commission approach consists of (i) assessment of overall budgetary requirement of the Centre and States to determine the volume of resources available to transfer with the Centre and required by the individual States and during the period of recommendations, (ii) projecting of States' own revenue and current expenditures (iii) distributing the sharable taxes between the Centre and States and State inter-se (iv) filling the gap between projected expenditure and revenue after tax devolution with grants. This is popularly known as gap filling approach.

The gap filling approaches used for the distribution of grants are subjected to severe criticisms. First none of the Finance Commissions assessed the overall resources position of Centre and proportion of resources required to meet its commitment on any objective basis, although the terms of reference explicitly required them to do so (Rao and Chelliah, 1991). The use of grants-in-aid given mainly to fill the projected budgetary gaps of the State after devolution has been criticized virtually by every study on the subject. First, it pointed out that such an approach has implicit in it a strong disincentive to tax effort and to reduce fiscal profligacy (Lakdawala, 1967, Bird and Smart 2002, Gulati, 1973 and Chelliah, 1981), since under this system those with highest expenditure and lowest taxes get the largest transfers.

It has been argued that the overall effect of the approach adopted by the Commissions is to render the scheme of transfers unjust (Gulati and George, 1978).

This is because, in the distribution of sharable taxes, prominent weight is assigned to the population factor (is) scaling other variables (Datta, 1979) and incorrect criteria adopted by Finance Commissions. The recent Finance (II phase) Commissions have modified the above approach and methodology in response to the criticisms. First, they introduced norms selectively by targeting the rates of growth of revenue and expenditures, assuming certain rate of interest and dividends on the loans given and invested by the governments (Sarma and Kalyani, 1987). Second, tax devolution was enhanced substantially so that very few States were left with gaps after devolution. The recent Finance Commissions (II phase) brought about grants

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This does not help inter-State equity.

to equalize the standard of certain specific services. Although the First Finance Commission made such a grant to equalize primary education levels and third FC for improvement in communications, sizable amount of up-gradation grants were given since Sixth Finance Commission (1973) onwards. This was argued as a way of making transfer more progressive (Gulati, 1978). ✓

2.3.2: Plan Transfers

Plan transfer² from the Centre consists of grants and loans given to States. In earlier years, these were distributed largely on adhoc basis where in the quantum of transfer and its loan-grant components were largely discretionary (Rao and Chelliah 1991). However, since 1969, the adhocism and arbitrariness in transfer by Centre assistance declined, as the allocation was done on the basis of criteria adopted by Gadgil Formula approved by the National Development Council since then. The latest modification of the formula was done in December 1991. According to this, at present 30 per cent of the fund available for distributions are kept apart for the Special Category States (SCS). Assistance to SCS is given on the basis of plan project formulated by them; and 90 per cent of transfers are given by way of grants and the remaining as loans. The 70 per cent of the fund available to major States is distributed with 60 per cent weight assigned to population, 25 per cent to per capita SDP and 7.5 to fiscal management, and remaining 7.5 per cent to special problem of the States. Interestingly, plan assistance has no relation with the investment requirement of States. The transfers are not directly related to the shortfall in State resources, given the required volume of plan investments and own resources reckoned at a standard performance level. The plan assistance given to the States are not related to plan investments, their sectoral composition, resources available with the States or their fiscal performance (Rao and Singh, 2005).

The entire plan transfers are not formula determined, only 'normal' central assistance for state plans are.

² Plan transfer includes State plan grants and Central plan grants by the Planning Commission. It is discussed in detail in chapter four.

Table 2.4: Gadgil Formula

| Criteria | | Original (1968) | Updated (Fifth plan) | Modified Gadgil Formula (1980) | NDC revised Formula (1991) |
|----------|--|--------------------|----------------------------|---|-------------------------------------|
| 1 | Population | 60 | 60 | 60 | 60 |
| 2 | Per capita Income | 10 | 10 | 20 | 25 |
| | i) According to deviation method covering only state with per capita income below the national average | 10 | 10 | 20 | 20 |
| | ii) According to distance method covering all fifteen states | - | | - | 5 |
| 3 | Performance* | | | | 7.5 |
| 4 | Tax effort | 10 | 10 | 10 | |
| 5 | Continuing projects | 10 | 10 | Nil | Nil |
| 6 | Special Problems | 10 | 10 | 10 | 7.5 |
| | Total | 100 | 100 | 100 | 100 |

Note: *Fiscal performance includes tax effort, fiscal management, population control, female literacy, on-time completion of externally aided project and land reforms.

2.3.3: Assistance for Central and Centrally Sponsored Scheme

Assistance to State via central sector and centrally sponsored scheme constituting about 20 per cent of total transfer is the most controversial component of transfers (Rao and Singh, 2005). These are neither based on the recommendations of Finance Commission nor are determined by Gadgil formula, but are discretionary. The central sector schemes are assisted entirely by the central government; State merely executes this programmes. The centrally sponsored schemes on the other hand are shared cost programmes and central assistance is given by way of grants or loans decided by each of the programmes. The rationale for introducing these programmes is ostensibly to finance activities which have high degree of inter-state spillovers or are in nature of merit goods. These are discretionary transfers (Grewal 1975, George 1986, Nanjundappa and Rao 1973, Garg 2006). Besides discretionary elements implicit in these transfers, it is pointed out that the conditionality imposed by the Centre including those of staffing pattern tends to distort States' own priorities and programmes (Rao and Chelliah,

1991). There were approximately 190 centrally sponsored schemes (CSS) in operation during 2005-06, in which Centre has complete discretionary power. The budget outlay of these 190 programmes was approximately 49 per cent of total gross budgetary support to central plan. Out of total CSS outlay 63 per cent of CSS fund bypass the State budget and go to the States' agencies and local bodies directly (Garg, 2006).

Rao and Singh (2001) and Singh and Vasishtha (2004) found evidence supporting the bargaining view of federalism, State with indication of greater bargaining power seems to receive larger per capita transfers. Surprisingly, Rao and Singh (2001) noted that equalization impact of statutory and discretionary transfers were broadly similar in the linear regressions, despite the very different institutions governing them. On the other hand factors governing the grants for State plan schemes seemed to be quite different, and tied to political consideration in plausible way. Singh and Vasishtha (2004) found greater temporal variation in Planning Commission transfers. The independent variable used for the analysis are SDP, population, political variable measuring proportion of ruling party member in parliament coming from a particular State, variable measuring whether same party was in power at the Centre and States. Singh and Vasishtha (2004) introduced two more independent variables, variable measuring lobbying power and per capita constant price SDP along with dummies for planning and Finance Commission. Given the heterogeneity of methods of transfer, they grouped transfer into two broad categories, statutory and discretionary transfers, leaving separate third category and grants for State plan schemes. The period of analysis is restricted to 10-year period from 1983-84 to 1992-93. In both studies non-statutory components in the State plan grants are not separated from statutory non-plan grants. Another study by Chakraborty (2003) using pooled data of 15 major States for the year 1990-91 to 1999 - 00 in Fixed Effects model found that aggregate transfer are positive function of per capita income, suggesting the mechanism of States transfer in operation in India has been very regressive.

2.4: Impact of Reform on Federalism

The structure of fiscal federalism in India was formed at the time when its economy was much less market oriented than today, with Centre having a large role in regulation, administration and planning of the economy (Ehtisham and Crag, 1997). Economic liberalisation has brought about changes in structure of federalism. Globalisation reassigned revenue and expenditure role of central and states government. In the context of opening up of the economy we can conceptualize the reforms as falling into two groups (i): those reforms which ensure efficiency in federal finance and (ii) measures which are taken as compensation policy during the globalization period.

Globalisation has significant impact of size on Central and States governments. The reassignment of taxes, debt restructuring, conditionality on transfer to ensure efficiency in resource allocation, can influence the size of Central and State governments. The influence on State governments can be in two ways | one directly influencing the revenue raising capacity of the states, two, through transfer from centre to states. Direct influence of globalisation on size of State governments can be attributed to reassignment of taxes and difference in the GSDP of the states. The size of State Government also influenced by transfer from Centre to State in two ways: one, increasing conditionality on transfers during the globalisation period and via influencing the size of central government.

What about globalisation affecting relative debt patterns and how changing public finances

2.4.1: Assignment of Tax

There are several ways in which the tax systems impinge on overall reforms and performance of the economy. Globalization and opening up of the economy have two direct impacts. First, the aggregate tariff revenue has lowered as tariff rate are lowered; they increase the importance of other sources of revenue. Secondly, mobility of tax base increased, making it difficult to tax these sources. Some of the changes in the tax in the last two decades are well known: reduction in tariff rate, reduction in tax rate coupled with attempt to broaden the tax base, a gradual movement from excise duty and sales tax to VAT at both Central and State level, lastly reforms to avoid cascading and very high and variable effective rate of indirect taxation.

In particular major steps taken were trade liberalization, in the forms of reduction in tariffs and conversion of quantitative restriction to tariffs and a sweeping a large segment of restriction on domestic industrial investment (Srinivasan, 2004). Reduced trade tariff in India since 1991 have resulted in an uncompensated loss in aggregate tax revenue, which had accounted to two per cent point of GDP by 2001-02. (Rajaraman, 2004). The theoretical literature suggests that the revenue compensation for the lost trade revenue be sourced from domestic indirect taxes, and recommended a price neutral destination based VAT as the optimal instrument (Rajaraman, 2004). State sales tax and excise duties have also shown proportionate decline, so that overall tax-GDP ratio has declined by almost two percent point in 1990 (Rao 2000). A part of decline in State sales tax and excise duty is attributed to poor performance of manufacturing sector during 1990s.

2.4.2: Changes in intergovernmental transfers

The recent Finance Commissions (9th, 10th, 11th and 12th) as well introduced number of changes in the system of transfer of resources from Centre to states. These changes mainly aim to restructure the transfer system by giving emphasis on efficiency in the allocation of resources. One of the welcome changes was that Ninth Finance Commission's adopting a normative approach in accessing the receipts and expenditure on revenue account of the States and Centre, keep a view on special problem of the States and Centre if any. The Commission has projected the revenue and expenditure of each State on a normative basis that reflects the in revenue-effort and expenditure needs of the State better than the gap feeling approach. Secondly, Tenth Finance Commission set out with alternative schemes of devolution so that state can benefit from the aggregate revenue buoyancy of central taxes through global pool sharing. Under these schemes proceedings of all central taxes, except surcharges, cess and cost of collection, constituted a common sharable pool from which states were to be given 29.5 per cent, which was subsequently adopted by the Central government and the same system of global sharing, instead of tax specific sharing was also recommended by the 11th and 12th Finance Commissions. As per the recommendations of the 12th Finance Commission, the divisible pool is fixed at 30.5 per cent.

When we talk about the changes, it needs to be highlighted that unlike earlier Commissions, the Eleventh and Twelfth Finance Commissions were asked review the state of finance of union and states and suggest fiscal restructuring measure, in the face of deteriorating fiscal situation of centre and states. Both the Commissions were asked to “review the state of finance of union and states and suggest plan by which the government, collectively and severely, may bring about restructuring of the public finance restoring budget balance, achieving macroeconomic stability debt reduction along with equitable growth”. Eleventh and Twelfth Finance Commission in its schemes of transfer of resources from the Centre to State has attempted to incorporate element of efficiency in our federal system by suggesting fiscal restructuring measures. The 12th Finance Commission has gone one step further by linking ‘Debt Relief and Debt Consolidation’ to the states with the enactment of Fiscal Responsibility Legislation by individual states, the issue discussed later.

Apart from this, the choice of determinants and weights attached in the distribution formula pertaining to devolution of tax reflect not only the equity but also the efficiency considerations of Finance commissions. Since the 1990s the efficiency factors such as tax effort and expenditure discipline have been given higher weights in the distribution formulas by the Finance Commission. Eleventh and Twelfth Finance Commission also gave higher weightage to efficiency considerations, by introducing tax effort and fiscal discipline in the horizontal distribution formula. The Tenth, Eleventh and Twelfth Finance Commission gave 10 %, 5 % and 7.5 % of the transfer on the basis of tax effort. Again Eleventh and Twelfth Finance Commission used fiscal discipline as one of the criteria for fiscal transfer and gave 7.5 Percentage of weight to fiscal discipline. The Eleventh Finance Commission also introduced incentive linked transfers by creating separate fund and linking transfers from this fund with the revenue deficit reduction of the states. However Rao (2004) argued that the size of incentive linked transfer is too small to influence the fiscal performance of the states. But introduction of efficiency criteria should not be at the expenses of equity among the States. The growing conditionality on transfer can shrink the autonomy of the states in expenditure decision.

Twelfth Finance Commission made a major break from the past in prescribing a new borrowing regime for the States. The proposals in this regard are: cessation of lending by the Centre and requiring the State to go to market for borrowing, restructuring all outstanding central loans of the States for fresh period of twenty years carrying only 7.5 per cent of interest ratio as against 10.5 per cent at present. A debt write-off schemes for remission of the States payable to Centre during 2005-10 linked to implementation of fiscal reforms. The Twelfth Finance Commissions recommended enactment of Fiscal Responsibility Act (FRA) at Centre and States. FRA which required the State government to reduce the fiscal deficit to 3 per cent of SDP by 2009 and bring the revenue deficit to zero in that year is in place. Except West Bengal and Sikkim, all other states have enacted the FRA.

2.4.3: Transfers bypassing the State budget

Another major change has been witnessed in the form of central scheme bypassing State budgets and directing funds to State agencies and local bodies. Garg (2006) concluded in his study that significant amount of central plan expenditure on State subjects bypasses the State budgets. According to his estimates, 23.29 per cent gross budgetary support bypasses the State budget and goes directly to the district authorities and other implementing agencies

To give an idea of the nature of these transfers, these are various flagship programmes of the central government spread over social and economic services. Few major programmes bypassing the state budget are Sarva Shiksha Abhiyan (SSA), National Rural Employment Guarantee Schemes (NREGS), Bharat Nirman Yojana, National Rural Health Mission programmes with huge amount of allocation in the budget. The expenditure on SSA increased from Rs 10886.11 crore in 2006-07 to Rs 12020.24 crore in 2007-08 and the expenditure on NREGS increased from 20926.98 crore in 2006-07 to Rs 23415.10crore in 2007-08 (table 3.7). Direct transfers from the centre to local bodies and other district level implementing agencies have increased substantially and constituted 1.23 per cent of GDP in 2006-07.

However, it needs to be mentioned that the reforms of 1991 gave the State government more freedom to make policies independently and this has extended the impact of openness and liberalization to the subnational level. In particular, while only national government can determine the import duties, State government can now determine the incentive of foreign capital to enter their jurisdictions and also direct market borrowing. The final impact of entry of capital on a subnational government will therefore depend also on internal mobility of capital and labour. Hence the attention must be paid in the internal mobility of goods and factors in addition to the external liberalisation. Subnational tax and regulatory policy can assume greater importance in the scenario of greater economic reform under globalization (Singh and Srinivasan, 2004).

2.5: Summary

The review of exiting literature reveals various deficiencies in the existing federal fiscal transfer system in India. The important among them are, centralization in the federal structure, criteria for devolution, discretionary elements in Planning Commission, multiple agency of transfer, gap filling approach adopted by the Finance Commission for giving grants, overlapping role of Finance and Planning Commission, limited power of local government and transfer from Centre and States, widening vertical and horizontal imbalance, lack of efficiency in the federal system.

The Restructuring of public finance as a part of reform was initiated to address drawbacks in the federal finance. During the reforms period, reform policies were initiated in two directions: one in order to ensure efficiency in the federal system and second to compensate the losers of liberalization. There are sharp cut in customs duties, the excise duty and States sales tax replaced by CENVAT and States level VAT. There are also cut in direct and indirect taxes in order to broaden the tax base and to provide incentive for manufacturing sector to compete in the international market. Efficiency measure also includes reforms of public sector enterprises and debt restructuring programmes.

In period of liberalisation, government also increased its expenditure towards education, health, and infrastructure, social security measures etc where market fails to attain efficiency. Government introduced number of welfare programmes such as Sarva Shiksha Abhiyan, National Rural Employment Guarantee schemes, Bharat Nirman Yojana, National Rural Health Mission Programmes with a huge amount of allocation in the budget. Though these programmes are in the functional domain of the state governments, these are run by central government and transfers made to run these programmes are directly going to the district level implementing agencies bypassing the state budget which has serious implications for federal transfers, function and finance.

Chapter III

TRENDS IN STATE FINANCE

In this chapter we undertake a detailed review of State finances, both the revenue and expenditure side of the budget. This chapter is organized in four sections. Section 3.1 provides an overview of the overall trends in state finances and fiscal imbalance profile of the States. Section 3.2 discusses the level of vertical imbalance in Indian federalism and critically evaluates the nature and quantum of resource transfers from Centre to States. In section 3.3, the issue of horizontal imbalance in Indian federalism is discussed. Section 3.4 summarizes the main findings of the chapter.

3.1: An Overview of State Finances

A brief overview of State finance is given in table 3.1. The ratio of all state revenue deficit to GDP steadily increased over the years from 0.6 per cent of GDP in 1980 -85 period to 1.8 per cent during 2001-06 period (See Figure 3.1) while in recent years this ratio has declined and reached to 1.2 per cent of GDP in 2004-05. The ratio of fiscal deficit to GDP increased from 2.7 per cent to 3.8 per cent during the same period. The primary deficit to GDP ratio declined from 1.8 per cent to 1.0 per cent for the same period of analysis. Since 2002 -03, it has started declining sharply. It needs to be mentioned that there has been considerable improvement in the Fiscal Ratios of States in recent years, which coincides with the era of Fiscal Responsibility Act (FRA) (Chakraborty, 2008). The fiscal deficit has declined from 4.0 per cent of GDP in 2002-03 to 2.9 per cent in 2005-06. The revenue deficit has declined from 2.5 per cent of the GDP in 2000-01 to less than one per cent of GDP in 2005-06. However the outstanding debt to GDP ratio has increased sharply over the years from ratio of 19.2 per cent of GDP during the first half of eighties to 33.0 per cent of GDP during the period 2001-05; and interest payment continued to remain as one of the major components of revenue expenditure of states. A detailed analysis of both revenue and expenditure sides of the state budget will give us an idea of the emerged imbalance profile of the state finances.

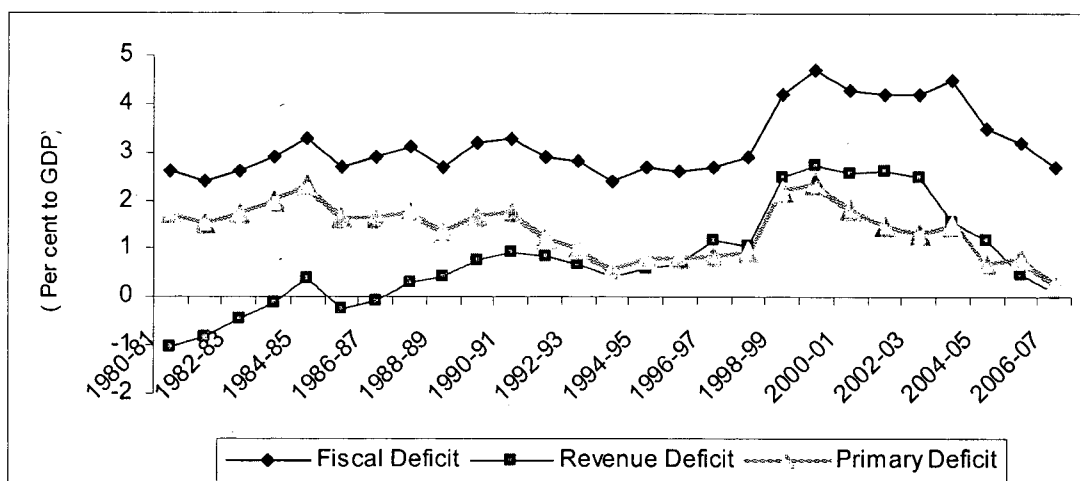
which?

Table 3.1: An Overview of State Finances

| Year | 1980-1981 to 1984-85 | 1985-86 to 1989-90 | 1990-91 to 1994-95 | 1994-95 to 1999-00 | 2000-2001 to 2005-06 | 2000-01 | 2001-02 | 2002-03 | 2003-04 | 2004-05 | 2005-06 | 2006-07 |
|-------------------------------------|----------------------|--------------------|--------------------|--------------------|----------------------|---------|---------|---------|---------|---------|---------|---------|
| Revenue receipt (1+2) | 11.0 | 12.0 | 12.1 | 10.9 | 11.9 | 11.3 | 11.2 | 12.0 | 12.1 | 11.9 | 12.7 | 12.6 |
| 1) Own Revenue (a+b) | 6.8 | 7.2 | 7.2 | 6.9 | 7.4 | 7.1 | 7.0 | 7.4 | 7.5 | 7.6 | 7.6 | 7.5 |
| a) Own Tax revenue | 4.8 | 5.3 | 5.4 | 5.2 | 5.9 | 5.6 | 5.6 | 5.9 | 6.0 | 6.0 | 6.3 | 6.2 |
| b) Own non Tax revenue | 1.9 | 1.9 | 1.8 | 1.6 | 1.5 | 1.5 | 1.4 | 1.5 | 1.5 | 1.5 | 1.3 | 1.3 |
| 2) Transfer From Center (c+d) | 4.2 | 4.8 | 4.8 | 4.0 | 4.5 | 4.2 | 4.2 | 4.6 | 4.6 | 4.3 | 5.1 | 5.1 |
| c) Share in central tax | 2.4 | 2.6 | 2.6 | 2.4 | 2.4 | 2.4 | 2.3 | 2.3 | 2.3 | 2.5 | 2.6 | 2.7 |
| d) Grants from Center (i+ii+iii+iv) | 1.8 | 2.2 | 2.3 | 1.6 | 2.1 | 1.8 | 1.9 | 2.3 | 2.3 | 1.8 | 2.5 | 2.4 |
| i) State Plan Scheme | 0.8 | 0.9 | 1.0 | 0.8 | 0.9 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 | 0.9 | 1.0 |
| ii) Central Plan Scheme | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 | 0.0 | 0.1 | 0.1 |
| iii) Centrally Sponsored Scheme | 0.4 | 0.5 | 0.7 | 0.4 | 0.5 | 0.3 | 0.4 | 0.6 | 0.6 | 0.3 | 0.5 | 0.4 |
| iv) Non plan grants | 0.3 | 0.5 | 0.4 | 0.4 | 0.6 | 0.6 | 0.6 | 0.6 | 0.4 | 0.5 | 0.9 | 0.8 |
| Revenue Expenditure (1 + 2+3) | 10.6 | 12.2 | 12.8 | 12.5 | 13.7 | 13.9 | 13.8 | 14.5 | 13.7 | 13.1 | 13.2 | 12.7 |
| 1) General Service | 2.9 | 3.6 | 4.2 | 4.8 | 6.0 | 5.6 | 6.0 | 6.4 | 6.3 | 6.0 | 5.8 | 5.4 |
| a) Pension | 0.3 | 0.5 | 0.6 | 0.8 | 1.2 | 1.2 | 1.2 | 1.3 | 1.2 | 1.2 | 1.2 | - |
| b) Interest Payment | 0.9 | 1.3 | 1.7 | 2.0 | 2.8 | 2.5 | 2.7 | 3.0 | 3.0 | 2.8 | 2.6 | - |
| 2) Social expenditure | 4.2 | 4.9 | 4.6 | 4.6 | 4.6 | 5.0 | 4.7 | 4.8 | 4.3 | 4.5 | 4.2 | - |
| 3) Economic Expenditure | 3.1 | 3.6 | 3.7 | 3.0 | 2.9 | 3.0 | 2.9 | 3.0 | 3.1 | 2.9 | 2.5 | - |
| Developmental | 7.3 | 8.5 | 8.4 | 7.6 | 7.5 | 8.0 | 7.6 | 7.8 | 7.4 | 7.4 | 6.7 | - |
| Capital expenditure (1+2) | 4.7 | 4.0 | 3.2 | 2.7 | 3.2 | 2.6 | 2.7 | 3.6 | 3.3 | 3.9 | 3.2 | - |
| 1) Capital Out lay | 2.0 | 1.8 | 1.5 | 1.4 | 1.8 | 1.5 | 1.4 | 1.7 | 1.9 | 2.2 | 2.2 | - |
| 2) Net lending | 1.1 | 0.9 | 0.6 | 0.4 | 0.3 | 0.2 | 0.2 | 0.6 | 0.3 | 0.4 | 0.2 | - |

Source: Handbook of Statistics on States Finance and Handbook of Statistics on Indian Economy, RBI (Various Issues)

Figure 3.1: Revenue, Fiscal and Primary Deficit as percent of GDP



A number of factors such as a growing interest burden, increases in pension liabilities, unrestrained administrative expenditure and increase in the committed liabilities like increase in wages and salaries and losses incurred by state public sector undertakings have contributed to the growth of revenue expenditure of the States. As evident from the table 3.1 the pension liability has increased from 0.3 per cent in 1980-1985 to 1.2 percent in 2000-2005. On the similar line, interest payment has also increased from 0.9 per cent to 2.8 per cent in during the same period. But both pension and interest payment has shown declining trend in recent years in relation to GDP. The decline in interest payment is largely attributed to softening of interest rate and debt swap schemes.

Table 3.2: Aggregate Tax Buoyancy: All States

| Year | Tax Buoyancy |
|---------|--------------|
| 1981-85 | 1.10 |
| 1986-90 | 0.97 |
| 1991-95 | 0.99 |
| 1996-00 | 0.97 |
| 2001-05 | 1.20 |

Source: *Handbook of Statistics on States Finance and Handbook of Statistics on Indian Economy, RBI (Various Issues)*

As evident from the Table 3.2, inadequate tax buoyancy¹ (table 3.2) has also been attributed to the large disparity in the growth of receipts and expenditure and the consequent widening of fiscal gap of the state governments. On the revenue

¹ The tax buoyancy is calculated through a double log regression: $\ln (TR_t) = \alpha + \beta_1 \ln (GSDP_t) + u_t$, where $\ln (TR_t)$ = log of (nominal) tax revenue in year t; $\ln (GSDP_t)$ = log of (nominal) GSDP in year t, α = intercept and β_1 = buoyancy estimate.

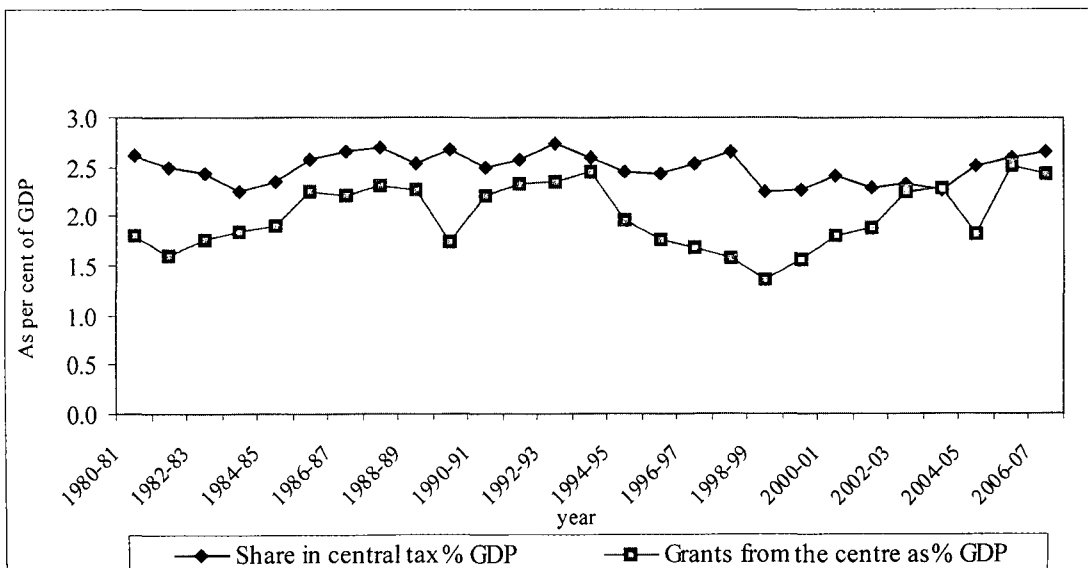
not much!

side aggregate revenue receipts to GDP ratio has decreased from 11 per cent in 1980-85 to 10.9 percent in 1995-2000. The period 1995 to 2000 has shown highest decline in revenue receipts. This was owing to the decline in both own revenue receipts and transfer from center. It needs to be noted that during the 1990s, there has been a sharp decline in transfers to the states. The tax buoyancy of the state government declined from 1.10 during 1981-85 to 0.97 during 1996-00.

if this is so, there must have been an increase during 1985-95

It is important to note that improvement in revenue receipts to GDP ratio during recent years was due to increase in own tax to GDP ratio and increased transfer of resources from center to states. While the own non-tax revenue of the states which consists of receipts of dividend, profit from public sector unit, user charges and interest receipts has shown declining trend through out the period after 1985. If we look at the transfers in a greater detail, the total transfer from Centre was 4.8 per cent of GDP during 1985-90 declined to 4.0 per cent of the GDP during 1996-2000. Both grants and tax components of devolution has shown a declining trend but rate of decline in grant component was larger than tax devolution. This in turn has contributed to large revenue deficit during nineties and as a result, the capital expenditure as per cent of GDP has declined from 4.7 per cent of GDP during the last half of 1980s to 2.7 in 2001-02. Since then, with the decline in revenue deficit, it started increasing and reached to 3.2 per cent of GDP in 2005-06.

Graph 3. 2: Tax share and Grants from the Centre to State states per cent of GDP

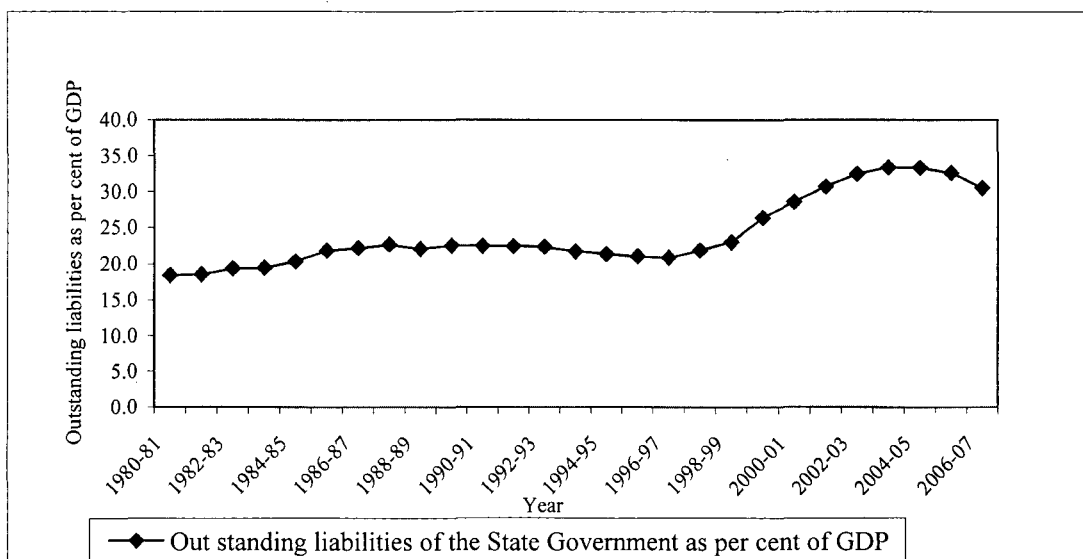


As pointed out by Anand, Bagchi and Sen (2001) and Rao and Singh (2005), the fiscal stress has seriously constrained the states' ability to discharge their primary responsibility towards social and economic services expenditures. The revenue expenditure on economic services has declined from 3.1 per cent in 1981-85 to 2.9 per cent of GDP in 2001-06. It is argued that essential public services are suffering while capital expenditure has remained stagnant or shrink in real terms in most states jeopardizing their growth prospects (Sen, 2000). Within revenue expenditure also, the implementations of the Fifth Pay Commission's recommendations have contributed to the increase in salary component of expenditure within various services, leading to a decline in non-salary component, which in turn adversely affected the operation and maintenance expenditure.

3.1.2 Outstanding Debt of State Government

As mentioned, the consequences of heavy reliance on borrowing to meet the expenditures, the ratio of outstanding debt to GDP has risen from 19.2 per cent of GDP in 1980-81 to 1984-85 to 31.8 per cent in 2000-01 to 2005-06. Two issues are important here: i) the sources of financing state government fiscal deficit and ii) interest payment on outstanding debt. The state government financed the growing fiscal deficit mainly through borrowing from the Centre, market and National Small Saving Fund (NSSF). On one hand annual average borrowing from Centre as per cent of total borrowing has declined from 48.7 per cent in 1981-85 to 9.4 per cent in 2001-2005. On the other hand the state borrowing from NSSF and market increased sharply during the recent years. Annual average net borrowing from NSSF has increased from 46 per cent of total borrowing in 1981-85 to 64 per cent in 2000-05.

Graph 3.3: Outstanding liabilities of States government as per cent of GDP



The Twelfth Finance Commission has recommended doing away with the practice of centre acting as an intermediary by borrowing itself and then lending to the states. It suggested that state government should have direct access to the market for borrowing and this should bring in market based fiscal discipline at state level. The idea is, if a state has to mobilize resources for itself from the market, it should have sound fiscal profile to have confidence of the borrower investing in the securities issued by the concerned state government. The globalization and growing market can help the state government to borrow from market. The states' share of market borrowing from 8.0 per cent in 1981-85 up sloped to 25.9 percent in 2000-05. This option will certainly be preferable to those states that are seen as credit worthy and able to raise market borrowing relatively cheaply (Ghosh, 2007). In fact of those states' with larger debt, low income and special category state may not be able to access the market easily and should be allowed to use central government as intermediary if they do desire. Although this option is available with the State to borrow from the Centre, it also needs to be pointed out that given the nature debt market with large captive investors, how the market based discipline will work in case of states in India is difficult to answer.

Available evidence shows that the market uses income level of a state as a proxy to ~~debt~~ repayment capacity and not fiscal prudence.

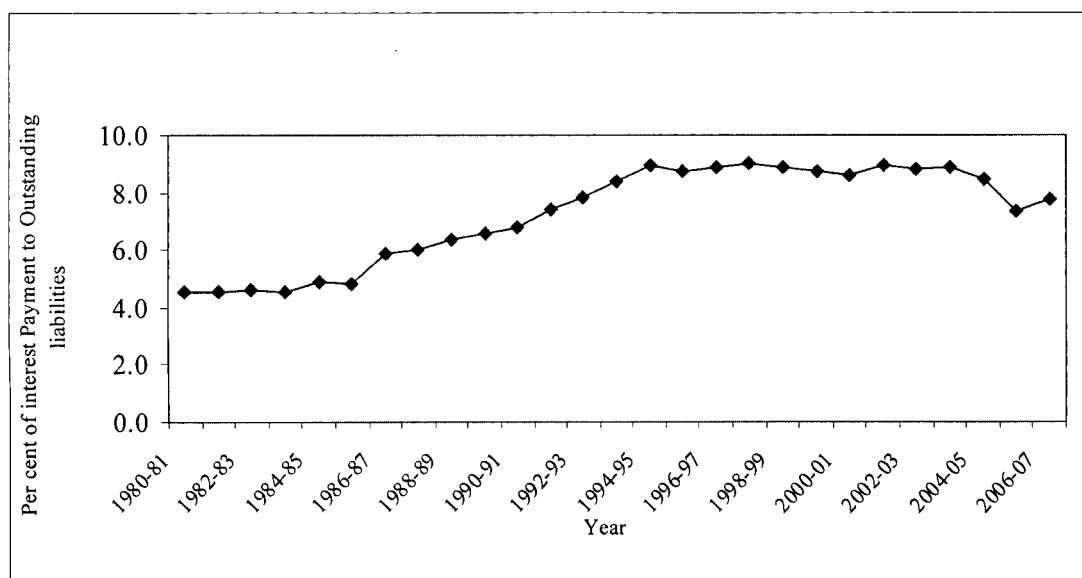
Table 3.3: Sources of Financing Fiscal Deficit

| Year / sources | Net loan from center | Net market borrowing | NSSF and others |
|--------------------|----------------------|----------------------|-----------------|
| 1980-81 to 1984-85 | 48.7 | 8.0 | 43.3 |
| 1984-85 to 1989-90 | 56.2 | 14.4 | 29.4 |
| 1990-91 to 1994-95 | 49.2 | 16.0 | 34.9 |
| 1995-96 to 1999-00 | 39.9 | 17.2 | 42.9 |
| 2000-01 to 2005-06 | 9.4 | 25.9 | 64.7 |
| 2000-01 | 9.4 | 14.0 | 76.6 |
| 2001-02 | 11.4 | 18.0 | 70.6 |
| 2002-03 | 0.0 | 28.3 | 71.7 |
| 2003-04 | 14.2 | 47.5 | 38.3 |
| 2004-05 (RE) | 5.3 | 29.8 | 64.9 |
| 2005-06 (BE) | 16.8 | 15.6 | 67.6 |

Source: Handbook of Statistics on State Finance, RBI (various issues)

As debt stock kept on growing the interest burden on states budget rose sharply in the nineties. Figure 3.3 reveals that cost of maintaining the debt stock has increased from 4.6 per cent of outstanding debt in 1980-81 to 9 per cent in 1996-97 and then declined to 7.8 per cent in 2006-07. As a result of fiscal restructuring by the state government and the prevalence of low interest rate regime and introduction of debt swap schemes, the cost of maintaining outstanding debt has declined in recent years. In other words, the decline in the cost of maintaining outstanding debt has been due to marginal decrease in stock of outstanding debt and also due to decrease in rate of interest on debt.

Figure 3.4: Average Cost of Debt



It is interesting to note that the transfer of NSSF loans, which carry high rate of interest is increasing on one hand and on the other the reverse investment by the state government in treasury bill, which carry low rate of interest constitute about two third of NSSF loans (RBI, 2005, Isaac, 2006). The state investment in treasury bill of central government has increased sharply since 2003 onwards irrespective of the fact that states are in financial constraint (RBI, 2006). This raises the question why state government is paying high rate of interest on NSSF loan and then investing in treasury bill, which carries low rate of interest. Isaac and Ramkumar (2006) argued that the states are investing in treasury bill because of legal constraint on its spending due to FRA.

3.2: The vertical imbalance

Having discussed the state finances and intertemporal movement in the level of fiscal imbalance, in this section we go in detail to examine how the transfer system has contributed to the level of imbalance and inequality in revenues and spending across states. The reasons for fiscal constraint at the state level owe its origin to resources sharing arrangement between states and center (Rao and Singh, 2005). Since majority of resources intensive expenditure rests with the provinces, in spite of their considerable access to financial resources, there still exist a large vertical imbalance between the revenue capacity and expenditure responsibility of the province vis-a-vis federal government. Vertical imbalance indicates the relationship of revenue relative to the expenditure responsibilities. The vertical imbalance can be measured in a number of ways:

In this study we measured the vertical imbalance in three ways:

v1: Percentage of own revenue to combined revenue receipt. It indicates own revenue of the state government in relation to combined revenue receipts of state and center.

v2: Per cent of State's revenue expenditure to combined revenue expenditure. It indicates the states' expenditure commitment vis-à-vis centre.

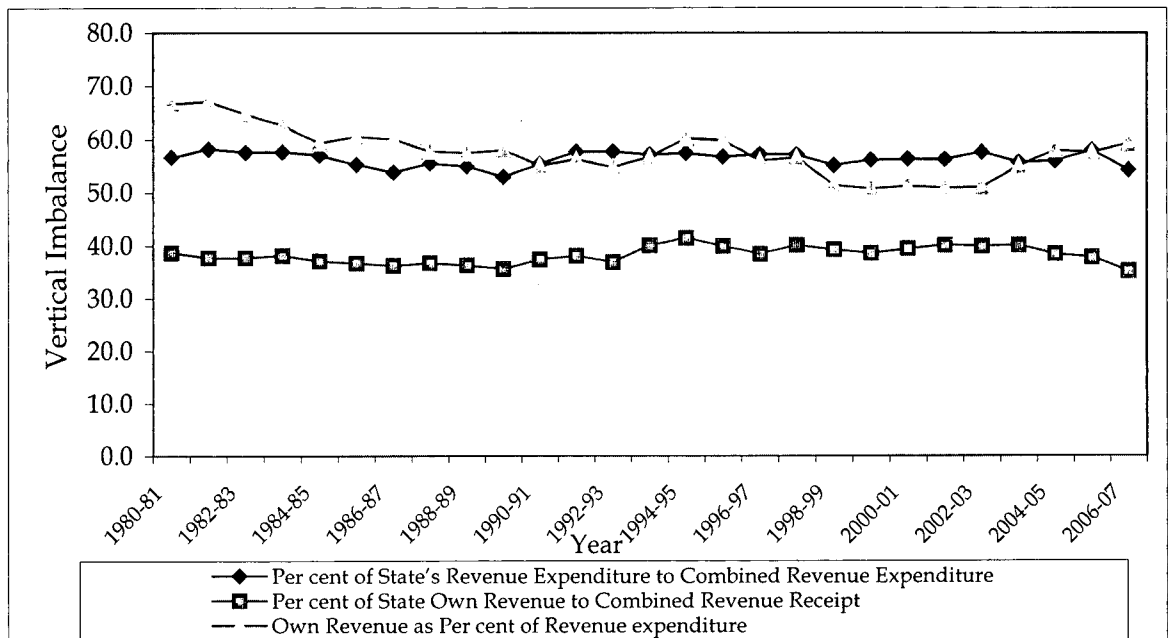
v3: Per cent of own revenue to state's revenue expenditure. This is defined as own revenue of the state divided by the state revenue expenditure. It indicates the ability of the state to finance its current expenditure from their current revenue. This ratio is also referred to as fiscal autonomy ratio (FAR). Table 3.4 illustrates the extent of vertical imbalance on the basis of these three ratios.

Table 3.4: Measures of Vertical Imbalance

| Year | Percentage of States revenue to Combined revenue receipt (v1) | Per cent of State's revenue expenditure to Combined revenue expenditure (v2) | Per cent of own revenue to state's revenue expenditure (Fiscal Autonomy Ratio) (v3) |
|--------------------|---|--|---|
| 1980-81 to 1984-85 | 37.9 | 57.4 | 64.1 |
| 1985-86 to 1989-90 | 36.3 | 54.5 | 58.8 |
| 1990-91 to 1994-95 | 38.8 | 57.1 | 56.6 |
| 1995-96 to 1999-00 | 39.2 | 56.5 | 54.9 |
| 2000-01 to 2005-06 | 39.3 | 56.6 | 53.6 |
| 2000-01 | 39.4 | 56.3 | 51.3 |
| 2001-02 | 40.1 | 56.3 | 51 |
| 2002-03 | 39.9 | 57.6 | 51 |
| 2003-04 | 40.1 | 55.7 | 55 |
| 2004-05 | 38.4 | 55.9 | 55 |
| 2005-06 | 37.8 | 58 | 58 |
| 2006-07 | 35.2 | 54.3 | 59 |

Source: Handbook of Statistics on State Finance, RBI, Indian Public Finance Statistics (various issues)

Figure 3. 5: Vertical Imbalances



The analysis in table 3.4 depicts the trends in vertical fiscal imbalances. The long run trend in vertical fiscal imbalance is also shown in Figure 3.5. The estimates reveal that the ability of the state government to finance current expenditures from their own current revenue (Fiscal Autonomy Ratio) has declined from 64.1 per cent

during 1980-85 to 53.6 per cent during 2000-07. Interestingly, the states' share of current expenditure and current revenue in the combined revenue and expenditure has remained stable, yet their dependence on transfer has increased. The declining share of states' own revenue to their current expenditure reflects that states' expenditure commitments grew at a greater rate than own revenue.

Table 3.5: Fiscal Dependency Ratio of State Government

| Year | Percent of transfer to revenue expenditure of State |
|--------------------|---|
| 1980-81 to 1984-85 | 39.9 |
| 1985-86 to 1989-90 | 39.3 |
| 1990-91 to 1994-95 | 37.9 |
| 1995-96 to 1999-00 | 32.2 |
| 2000-01 to 2005-06 | 33.0 |
| 2000-01 | 30.4 |
| 2001-02 | 30.3 |
| 2002-03 | 31.8 |
| 2003-04 | 33.5 |
| 2004-05 | 33.1 |
| 2005-06 | 38.8 |
| 2006-07 | 40.0 |

Source: Handbook of Statistics on State Finance, RBI (various Issues)

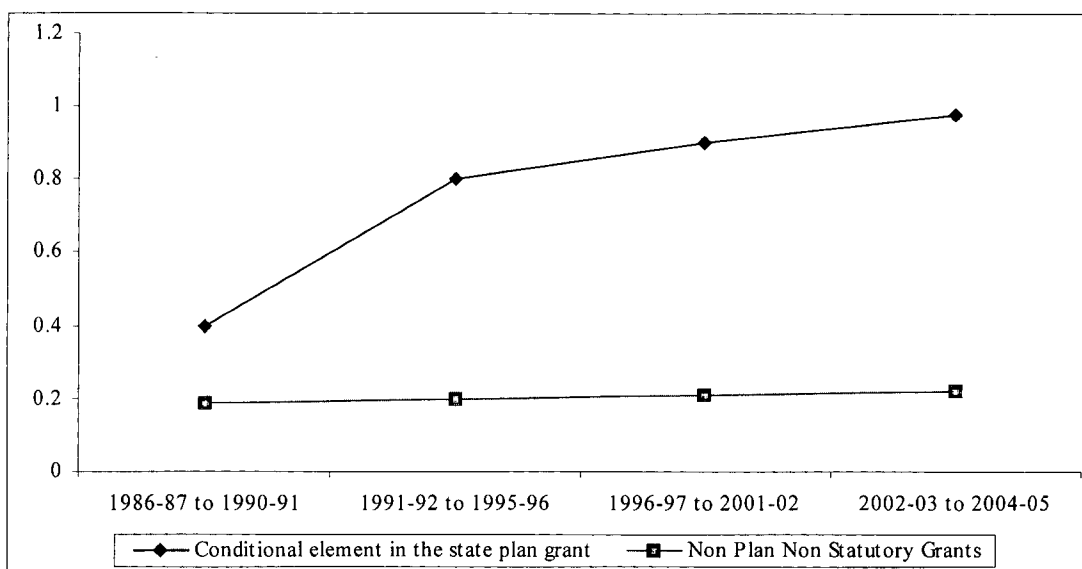
We have measured the fiscal dependence by estimating the transfer as a per cent of revenue expenditure of the States. It indicates how much of States' expenditure is financed out of transfer from the Centre. We have kept the capital expenditure out of this calculation as borrowing finances capital expenditure, especially when the States have no revenue surplus. The transfer to revenue expenditure ratio of the States though declined over the years especially during 1990s, it is increasing during recent years due to higher Central transfers due to the buoyant growth of Central revenues and in turn transfers as a percentage of revenue expenditure of States has increased sharply in last two years (Table 3.6).

3.2.1: Conditionality in Finance and Planning Commission Transfer

The degree of dependence of States on Central transfer would have significant impact on federal structure, especially on federal fiscal relationship. The different components of transfer can also have different impacts on the State's expenditure decision. For example the increase in specific purpose transfer with

matching requirement has significant erosion in the States' control over expenditure. If we look at the nature of Central transfers, the share of Central sector and Centrally sponsored scheme in total expenditure of States has increased (Table 3.1). Along with these the conditional components in the grants for State plan by the Planning Commission has increased over the years since 1985. As evident from the Figure 3.7, the conditional element in State plan grant increased sharply from less than 0.4 per cent of GDP to as high as more than 1 per cent of GDP by the end of 2004-05.

Figure 3:6: Conditional Element in the State Plan Grant and Non-Plan Grants (% of GDP)



Source: Budget Document and Handbook of Statistics on State Finance (Various Issues)

Not only that the conditional element within State plan grant also increased substantially. The recent trends in Central transfers also reveal an increase in discretion and conditionality linked funds such as fiscal reform incentive fund, accelerated power development and reform funds, urban reform incentive fund and rural infrastructure development fund, apart from various other forms of discretionary transfers that are directly going to the districts and other implementing agencies bypassing the States' budget. The conditional element in the State plan fund increased from 0.4 per cent of GDP in 1986-87 to 1990-91 to 0.89 percent of GDP in 2006. Direct transfers from the centre to local bodies and other district level implementing agencies have increased substantially and constituted 1.23 per cent of GDP in 2006-07. The table 3.7 indicates that the SSA and NREGS

constitute 22.5 and 24.9 per cent of total direct from the Centre to local bodies respectively.

Table 3.6: Direct Transfer from Centre to States

| Name of Ministry / Scheme | 2006-07 (RE) | 2007-08 (RE) | 2008-09 (BE) | 2006-07 (as % of total) | 2007-08 (as % of total) | 2008-09 (as % of total) |
|---|----------------|----------------|----------------|-------------------------|-------------------------|-------------------------|
| Ministry of Agriculture and Cooperation | 1712.7 | 2345.0 | 2981.0 | 3.8 | 4.6 | 5.2 |
| Ministry of Environment and Forest | 225.7 | 393.0 | 345.6 | 0.5 | 0.8 | 0.6 |
| Ministry of Health and Family Welfare | 5547.8 | 5844.7 | 6788.8 | 12.3 | 11.4 | 11.8 |
| Ministry of Human Resources Development | 11518.8 | 14357.2 | 14052.2 | 25.5 | 28.0 | 24.4 |
| <i>of which SSA</i> | 10145.7 | 12020.2 | 10949.0 | 22.5 | 23.5 | 19.0 |
| Ministry of Women and Child Development | 3.0 | 10.0 | 23.0 | 0.01 | 0.02 | 0.04 |
| Ministry of New and Renewable Energy | 155.9 | 169.3 | 291.6 | 0.3 | 0.3 | 0.5 |
| Ministry of Rural Development | 25452.7 | 27521.4 | 32544.2 | 56.4 | 53.7 | 56.5 |
| <i>of which NREGS</i> | 11233.9 | 10739.4 | 14339.6 | 24.9 | 21.0 | 24.9 |
| Ministry of Commerce and Industry | 550.0 | 569.2 | 570.0 | 1.2 | 1.1 | 1.0 |
| Total Grants | 45166.4 | 51209.8 | 57596.3 | 100.0 | 100.0 | 100.0 |

Source: Budget Documents, Handbook of Statistics on Indian Economy, RBI (Various Issues)

The EFC and TFC also have also pushed reform by converting statutory transfer to conditional funds. Especially EFC when it created an incentive fund for the states taking a part of the statutory non-plan revenue deficit grants. These directly cast a shadow on the State's freedom to design economic policies. It may also affect the equity in the distribution of transfer because it is not based on formula but conditionality.

On the basis of above analysis two important issues emerge, i.e., reduction in the devolution of fund to State government during 1990s and reliance on conditionality based transfer. Also it needs to highlighted that vertical imbalance has increased in recent years despite increase in transfers. The objective of horizontal transfer is to evolve a mechanism of distribution of transfer across the

provinces in such a way that the fiscal/revenue capacity is equalized. This equalization should in turn help individual province to provide comparable level of public services at reasonably comparable level of taxation and that does not seem to be happening in a predictable and stable manner due to the increase in the element of adhocism and arbitrariness in the Central transfers to the States.

3.3 The Horizontal Imbalance

Having discussed the vertical imbalance, in this section we discuss the issue of horizontal imbalance. The theoretical argument for intergovernmental transfer on equity ground has been made either in terms of ensuring horizontal equity of individual residing in the state across the country, or simply to ensure interregional equity (Musgrave, 1997, Buchanan, 1952). Scott (1952) disagree that fiscal equalization grants would result in allocative inefficiency by discouraging labour mobility. The labour will move from the place where the marginal product is low to place where marginal product is higher. The equalizing transfers create economic efficiency cost by discouraging movement of labour from the place that exhibit low fiscal benefits to a place which exhibit high fiscal benefit make the nation as a whole worse off (Ehtisham Ahamad and Jon Crag, 1997). While Buchanan (1950) argued that same result must be achieved in favorable circumstances by a favorable reverse movement of capital from richer states to poor states in the form of investment in land and mineral exploration and industrialization. In contrast to Scott's view, Buchanan (1965) proposed that in the absence of corrective measures rich state will provide higher fiscal surplus than a poor states creating incentives for migration to occur from latter to former and would eventually result in fall in fiscal surplus of publicly provided goods due to congestions. In the case of congestible public good like roads, facilities that are in fixed in size, the addition of each person who shares in the public goods will partly reduce the availability for those in the existing population. So Buchanan and Wagner (1950) that equalization grants from rich to poor state could help in arresting migration from latter to former.

Not clear

The fiscal significance of the difference among the state lies in their effect on relative ability of the state to raise revenue. It is conceivable that in some

circumstances low fiscal capacity is due to low need or low cost of providing public services. However in practice low fiscal capacity is generally accompanied by high welfare and education needs. In such circumstances, states will need to raise its tax rate above, or reduce its services below the level prevailing in other states (Oates, 1972). These fiscal disparities are generally alleviated through the mechanism of fiscal grants to the states. Federal grants to state are criticized by Buchanan (1950) as lacking ethical force and by implying an organic and undemocratic theory of state. Buchanan has made the argument for intergovernmental transfers on equity ground in terms of ensuring horizontal equity of individual residing in the state across the country. He suggested that the relative needs of state citizens should be the basis for assessing federal grants to the state government. In order to justify the equalization on equity ground, Buchanan argued that such payment can be used to ensure "equal treatment of equal" in all states thereby establishing geographic horizontal equity as distinct from vertical equity between different income groups. He introduced the concepts of fiscal residuum as to analyze this concept; it is the difference between his tax burden and the benefit he received from the public services. Musgrave (1950) criticized Buchanan as in Buchanan's view if state did not attempt redistribution, then fiscal residua will be zero; in that case the Buchanan's case for equalization grants would disappear because all taxation would be of benefit or quid pro quo variety.

Yet, state levy proportional income tax at uniform rate, the revenue collection and therefore per capita expenditure in rich state will be higher because of high taxable capacity and its public services are assumed to perfect substitute for private goods, the resident in these state will get higher benefit from public services for same tax rate payment (Boadway and Flatter, 1982). Boadway and Flatter (1982) defined horizontal equity in broad and narrow view. In narrow view central fiscal action would be directed to ensure horizontal equity after the state fiscal system has been established two person are equally well of after the central government fiscal activity. Central government need not offset inequalities introduced by the operation of the state budget per se, but take into account income distribution effect of states' fiscal operation.

In broad view, fiscal system should equalize within nation each state and two person in such a way that they are at least equally well off before and after the federal and states action. To fulfill these concepts of horizontal equity, it is necessary to give transfers so that states are encouraged to provide the same level of public services at a given tax rate so that the net fiscal benefit of the states are completely equalized. Full equalization of Net Fiscal Benefit is also justifiable on efficiency grounds because difference in net fiscal benefit arises due to inter-state tax exportation or redistributes policies of state government affects migration decisions and prevents marginal productivity of labour from being equalized among different provinces. So equalization payments are called for on ground of both equity and efficiency.

3.3.1 Governmental transfer to compensate for spillovers

When the benefit of public services provided by a state spillover outside its jurisdictions, it ignores the benefit accruing to the non-residents while deciding the amount of services provided. Optimal service provision in question can be ensured through coasian bribes or voluntary action of the jurisdiction to compensate for the spill over (Gramlich, 1993). The spillovers have to be attributed through central grant like Pigovian subsidies to offset spillover. Boadway and Flatter (1982) as well showed that grants could be used to internalize fiscal externality. Externalities are of two types, vertical and horizontal. Horizontal externality arises in jurisdictions at the same level of government. The vertical externality arises because of the policy of the Centre, which will influence the states.

3.3.2 Intergovernmental transfer to ensure competition between jurisdictions

In addition to these the central government has the responsibility to monitor both vertical and horizontal competition. Competition result in vertical imbalance because the higher levels of government have a comparative advantage in collecting revenues and lower level of government unit has comparative advantage in spending (Breton, 1995, 1965). This would necessitate intra-governmental flow of funds to stabilize both vertical and horizontal competition. A necessary condition for equalizing comparative strength of different regions within the country to enable them to provide equal level of social and economic infrastructure at a given tax price and central transfer or through direct investment (Rao and Singh, 2006).

3.3.3 Interpreting Data

Various studies found that in India, the intergovernmental transfer system has failed to achieve fiscal equity across the states. In India, we have three mechanisms for intergovernmental transfers of resources from Centre to States. These are Finance Commission, Planning Commission and Various Central Government Ministries. In this section, we are analyzing the horizontal distribution of transfers through various channels in Indian federation.

We restrict our analysis to fourteen major states of India. We categorises all the states into three on the basis of per capita SDP as high income states, middle income states and low income states. High income State are Gujarat, Haryana, Maharashtra and Punjab, middle state are Andhra Pradesh, Karnataka, Kerala, Tamil Nadu, West Bengal and lower income states are Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh (See Table 3.8).

Table 3.7: Per Capita GSDP across the States

| States | 1980-81 | 1990-91 | 2000-01 | 2004-05 |
|----------------------|---------|---------|---------|---------|
| High Income States | | | | |
| Haryana | 2647 | 8366 | 27769 | 41705 |
| Punjab | 3020 | 9384 | 30992 | 38391 |
| Maharashtra | 2671 | 8245 | 26063 | 37278 |
| Gujarat | 2200 | 6821 | 22152 | 34937 |
| Middle Income States | | | | |
| Kerala | 1690 | 4864 | 22017 | 30737 |
| Tamil Nadu | 1677 | 5638 | 23721 | 31325 |
| West Bengal | 1912 | 5162 | 23676 | 30928 |
| Karnataka | 1690 | 5213 | 19603 | 27044 |
| Andhra Pradesh | 1543 | 5253 | 19079 | 26648 |
| Low Income States | | | | |
| Rajasthan | 1373 | 4748 | 14750 | 19220 |
| Orissa | 1415 | 3472 | 11905 | 18755 |
| Madhya Pradesh | 1508 | 4653 | 12215 | 15806 |
| Uttar Pradesh | 1418 | 4025 | 10413 | 13106 |
| Bihar | 1062 | 3085 | 5659 | 6402 |

Source: National Account Statistics, CSO

For the empirical analysis, we examine all the four categories of transfers. Finance Commission transfers, which comprises of Shared tax, Non-plan Grants, Non plan statutory grant and Non-plan non-statutory grants. Planning Commission Grants comprises of Grants for state plan and Grants for central plan scheme. The discretionary transfers comprise of Grants for centrally sponsored scheme.

The sum of these categories constitutes total transfer from the center. We again aggregate total transfer on the basis of discretion of Center on each form of transfer. The plan grant consists of both statutory and discretionary components but it is difficult to separate the statutory component from total state plan grants for each states. In the case of non-plan grants we have classified it again as non-plan statutory grant and non plan non statutory grants. Apart from classification of Singh and Vasishtha (2004) and Rao and Singh (2005) we separated non-plan grants by finance commission as statutory and non-statutory. Therefore in order to avoid effect of discretionary transfer on statutory transfer we categorise the transfer as:

- a) Statutory transfers = Shared tax + non plan statutory grants
- b) State Plan grants
- c) Discretionary grants = Non plan discretionary grants + Grants for central plan + Centrally sponsored Scheme

The sum of these three categories constitutes total transfer. These three categories of transfers are analyzed in detail to understand the nature of distribution of these transfers over the years. To start with, we have estimated the per capita transfers in all these categories. The per capita transfers even within each group have shown wide fluctuations. In order to smoothen the data we used the three-year moving average method to analyse the trends in the distribution transfer across the states over the years.

3.3.3: Distribution of Per capita Statutory Transfer

As mentioned earlier, the statutory transfer consists of shared tax and non-plan statutory grants by the Finance Commission. The percentage share of high-income state in the total per capita statutory transfers remained 18 per cent during 1990-91 to 2002-04. However, it increased to 21.5 per cent in 2005-08. On the other hand the share of low-income states declined from 45.2 to 43.0 percent during 1990-92 to 1996-98. However, the middle-income states have more or less stagnant share of total statutory transfer, since 1990. Although the share to low income states increased in subsequent years to 46.2 per cent in 1999-01 period, it declined further to 43.0 per cent in 2005-08. In other words, there is no clear trend in the distribution of per capita statutory transfer in favor of high or low income States. In fact in recent years, the share of transfer seems to have increased for the high income States, while that of low income states declined.

Table 3.8: Distribution of Per Capita Statutory transfer (in percent)

| Year | High Income States | Middle Income States | Low Income States | Total |
|---------|--------------------|----------------------|-------------------|-------|
| 1990-92 | 18.7 | 36.1 | 45.2 | 100 |
| 1993-95 | 19.2 | 36.3 | 44.5 | 100 |
| 1996-98 | 18.6 | 38.3 | 43.1 | 100 |
| 1999-01 | 17.0 | 36.7 | 46.2 | 100 |
| 2002-04 | 18.0 | 37.7 | 44.4 | 100 |
| 2005-08 | 21.5 | 35.5 | 43.0 | 100 |

Source: Hand Book of State Finance, RBI (various issues)

3.3.4: Distribution of Per capita State Plan Grant

As discussed earlier there has been considerable increase in the discretionary element in state plan grants in recent years. The conditional element in the state plan grant has increased from 0.4 to 0.86 per cent of GDP. In this context, it is interesting to look at the distribution of state plan grants across the states. As depicted in table 3.9, the share of richer states in total per capita state plan grant was 17.7 per cent in 1990-92, whereas, it increased to as high as 26.9 per cent in 2005-08. On the contrary, the share of lower income states in total per capita state plan grants has declined from 51.7 to percent to 36.4 per cent during the same period.

Table 3.9: Distribution of Per capita State Plan grants (in percent)

| Year | High Income States | Middle Income States | Low Income States | Total |
|---------|--------------------|----------------------|-------------------|-------|
| 1990-92 | 17.7 | 30.6 | 51.7 | 100 |
| 1993-95 | 18.6 | 34.7 | 46.6 | 100 |
| 1996-98 | 23.3 | 35.2 | 41.5 | 100 |
| 1999-01 | 21.7 | 41.2 | 37.1 | 100 |
| 2002-04 | 22.5 | 37.1 | 40.4 | 100 |
| 2005-08 | 26.9 | 36.7 | 36.4 | 100 |

Sources: Hand Book of State Finance, RBI (various issues)

The increasing components of discretion in state plan grants as shown in the graph 3.1 can be the reasons for worsening horizontal imbalance in the distribution of state plan grants. Statutory grants are determined by the formula adopted by the Finance Commission whereas state plan grants is partly on the basis of Gadgil formula and partly arbitrary or adhoc based on discretion of Planning Commission. Our analysis of the distribution of the State plan grants reveal that discretion has been favourably skewed towards high income states, particularly in recent years.

3.3.5: Distribution of Per capita Discretionary Grants

Finally we look at the discretionary grants. Discretionary grant consists of three components. Non-plan non-statutory grants, which are determined by Finance Commission on the basis of conditions, central, plan scheme by Planning Commission and centrally sponsored schemes by various ministries.

Center sector schemes are assisted entirely by the central government, state merely execute the programmes. Centrally sponsored schemes are shared cost programmes and central assistance is given by way of grants or loans decided for each of the programmes. The central sector and centrally sponsored schemes have attracted sharp criticisms because of their arbitrariness, adhocism and discretion implicit in them.

Table 3.10: Distribution Per capita Discretionary Transfer (in percent)

| Year | High Income States | Middle Income States | Low Income States | Total |
|---------|--------------------|----------------------|-------------------|-------|
| 1990-92 | 21.1 | 31.7 | 47.2 | 100 |
| 1993-95 | 22.5 | 35.2 | 42.3 | 100 |
| 1996-98 | 22.8 | 37.0 | 40.2 | 100 |
| 1999-01 | 23.4 | 42.0 | 34.6 | 100 |
| 2002-04 | 23.7 | 39.9 | 36.4 | 100 |
| 2005-08 | 27.9 | 36.7 | 35.4 | 100 |

Sources: *Hand Book of State Finance, RBI (various issues)*

The table 3.10 specifies that there is a clear increase in the share of discretionary grants towards higher income state after 1990s. The estimates shows that in 1990-91 to 1994-95 period, the share of higher income state in total discretionary transfer was 19 per cent but it increased to 25 per cent during 2000-01 to 2005-06 period. On the other hand in the case of lower income states, their share in discretionary transfer has declined from 49 per cent to 43 per cent during the same period. It is also interesting to note that discretionary grants is more favorable to richer states as compared to grants for state plan during the reform period. This analysis excludes the distribution of resources through those schemes which are directly going to the districts and other implementing agencies by-passing the state budget. However, an aggregate view of that is given in table 3.6. If these direct transfers are also added to the discretionary transfers through the state budget, it would form a significant proportion of the total transfers.

3.4: Summary

The overview of State finances analyzed in the chapter, by dichotomizing the period into before and after the introduction of FRA, reveals that before 2003, revenue and fiscal deficits of the state government has increased sharply with a decline in capital expenditure. The analysis also revealed that the current account balance, on an average, improved in the year following the introduction of fiscal rules. The outstanding debt and the average cost of debt have shown a decline due to softening of interest rate and measures like debt swap schemes in recent years. While the expenditure on social and economic services declined and the expenditure on general services (interest payment and pension) roughly remained

the same during recent years indicate that state government achieved the fiscal target partly by reducing developmental expenditures. A shift in the sources of financing of debt of the State governments was also noted in favor of market borrowing.

There was an obvious trend towards increasing vertical imbalance during and after 1990s. This is particularly due to decline in the Central transfers during the 1990s. Secondly there was also a clear indication of increase in conditionality on transfer from Center to States. Conditional part in State plan grant by Planning Commission and non-plan grant by Finance Commission has increased in recent years. Discretionary grants also showed an increasing trend. Distribution of state plan grants and discretionary grants across the States show that the share of high income States in total discretionary transfers is increasing with a corresponding decline in the share of low income States.

Chapter IV

GLOBALIZATION AND SIZE OF GOVERNMENT

It is evident from the exploratory data analysis in the last chapter that state expenditure, especially development expenditure has declined in recent years. Also, we have witnessed a decline in central transfers during the 1990s and increase in the share of discretionary transfers in total transfers during this period. In this chapter, we examine econometrically, whether the contraction in government expenditure can be attributed to the openness/globalisation.

As mentioned in the introductory chapter, the macroeconomic effect of globalization on the size of government is a matter of debate. Keen and Marchand (1997), Tanzi (2000), Schulze and Ursprung (1999) argued that increasing integration of international market has powerful negative effect on the size of the government; while Geoffrey (1998), Rodrik (1998), Rudra (2005) and Cameron (1988) have refuted this claim and argued that international integration will increase the size of government to mitigate international volatility of income, social security programmes and welfare programmes. Isabella (1999) argued that trade liberalization results in revenue loss to the government especially in developing countries. The openness can result in revenue loss to the government in form of reduction in trade revenue, revenue from public enterprises and reduction in indirect taxes like excise duty in order to make the domestic producers more competitive in the market. Openness also constrains the government from raising revenue from the economy through the role of government in the economy as controller of foreign exchanges, interest rate etc.

Globalisation may give rise to competition between the governments. However it is an empirical question, whether it restricts or promotes horizontal and vertical governmental competition. It is widely presumed that the effectiveness of government intervention is lower in economies that are highly integrated with the world economy. This would suggest a negative correlation between the volume of international trade and the scope of government. The globalization may reduce revenue-raising capacity of Central and State governments. In India, the major

impact of trade openness on Central and State Governments has been the reduction in revenue receipts of Central government due to the decline in customs and excise duties. This in turn also has reduced the size of state government via reduction in transfers and also openness has widened the disparity in revenue raising capacity across the states due to the widening of differences in state income.

This chapter analyses the effects of globalization on the size of government expenditures in India, at national level. The chapter is broadly divided into following categories. Section 4.1 deals with key theoretical and empirical issues related to the links between openness and size of government, while section 4.2 presents an exploratory data analysis on the relationship between the two. Section 4.3 deals with the econometric estimation of the link between openness and size of Central government in an error correction model, after checking for the unit roots. Section 4.4 summarises the findings of the chapter.

4.1: Key Theoretical and Empirical Issues

As mentioned in section 1.1, globalization affects the size of government via *efficiency effects* and *compensation effects*. The central notion of the efficiency approach is that governments will reduce taxes and social welfare expenditures that diminish profits, discourage investment, and therefore threaten economic growth and international competitiveness. While the compensation hypothesis states that the globalization-induced welfare state retrenchment is potentially mitigated by citizens' preferences to be compensated for the risks of globalization.

Despite the convenience of employing a bivariate analysis of openness and government size, one may also wish to consider the co-variation between the two after controlling for at least the most important factors that influence on government size other than openness per se. Previous studies on the determinants of government spending have focused on a number of explanatory variables. The most important variable affecting the size of government are population, income, urbanization and previous year's expenditure of the government. Both population and income (Wagner's law) are positively related with government size. According to *Wagner's law*, demand for government services is income elastic, so that

government consumption in GDP is expected to rise with income. Other variables that determine the size of government are demography and structural indicators (Tait and Heller 1982, Ram 1987 and Heller and Diamond, 1990).

In the light of above studies, Rodrik (1998) includes GDP per capita, urbanization rate and dependency ratio of population as explanatory variables in addition to openness while analyzing the impact of openness on government size. Apart from these explanatory variables, Rodrik (1998) also used dummy for socialist countries, OECD member countries, dummies for geographical regions; as the analytics is framed in a cross-country set up. The openness is measured as ratio of trade (import plus export) to GDP. The dependent variable includes government consumption as share of GDP, which is measured as government expenditure minus interest payment. In Rodrik (1998) study, the sample of countries consisted of all the countries included in the Penn world tables, for which requisite data table exist. The Penn world data set includes more than 100 countries. He found a positive relationship between size of government and openness.

Against the backdrop of Wagners' hypothesis, Ram (2005) analysed the link between size of the government, openness and real GDP per capita in a lagged framework; based on the conjecture that government size respond to openness with a lag. The dependent variable, i.e., government size is defined as government's consumption of goods and services and excluding the transfers. Using a panel of 143 countries, the study found that the magnitude of co-variation between openness and government size vary dramatically across countries. Despite the tremendous diversity, the results do not indicate a significantly positive co-variation between the two variables.

The dual conjecture of openness and size of government debate - viz., efficiency and compensation hypotheses - is difficult to capture, if the study is confined to aggregate level of analysis. Rudra (2002) argued that most of the studies are focusing on total government spending, rather than welfare spending as the dependent variable, but doing so can be misleading. So the study used social security and welfare expenditure as the dependant variable; while both trade flows and capital flows are used as measures of globalization. The study tried to measure

the effect of globalization on welfare spending and also argued that it depends on labour influence in a political economy, including unionization rates in the model as an indicator of potential labour power in LDCs. The study found negative association between social and welfare expenditure and openness.

Garret and Mitchell (1999) in their study used the dependent variable, size of government, defined as vector of variables which includes total government spending, government consumption expenditure and social security transfers (all as per cent of GDP). While openness is defined as a vector of variables consisting of total trade to GDP, inflow and out flow of foreign direct investment and the international financial openness index. They used a set of control variables, namely, higher unemployment rate, GDP growth, higher dependency ratio, and cabinet portfolios. Higher unemployment rate, GDP growth and dependency ratio are assumed to be positively associated with higher levels of spending. The study included cabinet portfolios held by social democratic or labour parties and Christian democratic parties on the apriori that they are associated with greater welfare effort. The regression also used dummy variables to control for unit and temporal fixed effects. They found that trade is consistently and negatively associated with government spending.

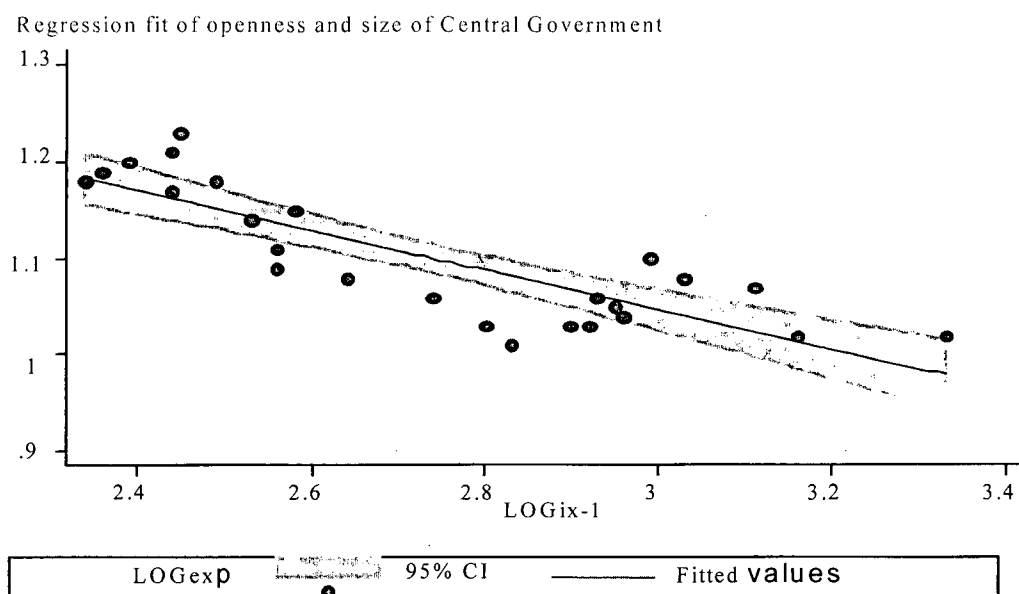
In the present study, the dependent variable, size of government is defined as total expenditure minus interest payment and examines how it is related to openness, while controlling for urbanization rate, real per capita GDP and lagged government expenditure. We assume that except the openness all other variables are positively associated with government size, while openness will have negative effect on government spending. The relation between the lag in openness and government size is analysed in order to decide whether contemporaneous effect or lagged effect of openness on government size is higher. The reason for the lagged effect is that the current year's openness measures may affect the size of government after one year, for instance, current year's reduction in tariff can affect on government size only after one year of lag (Ram, 2005). As mentioned earlier, urbanization necessitates higher government expenditure in the form of providing basic facilities like, electricity, transport, water, police and other public services.

According to Wagner's law, demand for government service is income elastic so that the share of government expenditure is expected to rise with income. So a priori a positive relation between urbanization and per capita income on government size is expected.

4.2 Interpreting Data

We hypothesize a negative relationship between globalization and government size. Fig 4.1 shows the relationship between openness and Central government spending during 1980-81 to 2005-06. The vertical axis represents the government spending as a share of GDP and horizontal axis shows the share of export plus import as share of GDP.

Figure: 4.1



The figure reveals a negative association between openness and size of Central government. The trade integration during nineties resulted in reducing the Central government size. There are several reasons for the decline in the size of Central government. Most important among them is the decline in the revenue receipts of Central government during the nineties. The effect of decline in the Central government size in turn result in reduction in the expenditure at the Central government level including transfer from Centre to States.

Table 4.1 Receipts and Expenditure of Central Government

| Particulars / year | 1980-81 to 1984-85 | 1985-86 to 1989-90 | 1990-91 to 1994-95 | 1995-96 to 1999-00 | 2000-01 to 2005-06 |
|-------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Total receipts (A+B) | 14.9 | 17.2 | 15.6 | 14.8 | 16.0 |
| A) Revenue receipts (a+b) | 8.9 | 10.4 | 9.5 | 9.0 | 9.5 |
| a) Tax Revenue (I+II) | 6.8 | 7.8 | 7.0 | 6.5 | 6.8 |
| I) Direct Tax (i+ii) | 1.4 | 1.3 | 1.5 | 1.9 | 2.8 |
| i) Personal Income Tax | 0.3 | 0.2 | 0.2 | 0.3 | 1.1 |
| ii) Corporate Income Tax | 1.1 | 1.0 | 1.2 | 1.4 | 1.6 |
| II) Indirect taxes (iii+ iv) | 5.4 | 6.5 | 5.5 | 4.6 | 4.0 |
| iii) Excise Duty | 2.6 | 2.6 | 2.2 | 1.7 | 2.5 |
| iv) Customs Duty | 2.6 | 3.7 | 3.1 | 2.7 | 1.3 |
| b) Non Tax Revenue | 2.1 | 2.6 | 2.4 | 2.5 | 2.7 |
| B) Capital Receipt | 6.0 | 6.8 | 6.1 | 5.8 | 6.6 |
| Total expenditure (A+B) | 16.7 | 19.6 | 17.3 | 15.6 | 15.9 |
| A) Development Expenditure (a+b) | 9.1 | 10.8 | 8.9 | 7.1 | 7.0 |
| a) Economic | 4.1 | 4.8 | 3.6 | 3.0 | 3.8 |
| b) Social | 0.8 | 0.6 | 0.6 | 0.8 | 0.9 |
| B) Non development expenditure | 7.6 | 8.2 | 8.4 | 8.5 | 8.9 |

Source: Handbook of Statistics on Indian Economy, RBI (Various Issues)

Table 4.1 shows that revenue receipts of Central government as percentage of GDP has declined from 17.2 per cent of GDP in 1985-90 to 14.8 percent during 1995-00. The reason for reduced revenue receipt of the Centre is due to declined tax revenue after nineties. The tax revenue as per cent of GDP has reduced from 7.8 per cent in 1985-90 to 6.5 per cent of GDP during 1995-00. But since 2000-01, the tax revenue as per cent of GDP has slightly improved.

It is seen that within the tax revenue, direct tax as a percent of GDP has increased throughout the period of analysis. It increased from 1.4 per of GDP in 1980-85 to 2.8 per cent during 2000-06. On the otherhand the indirect tax has declined from 6.5 per cent of GDP during 1985-90 to 4 per cent of GDP during 2000-06. Both excise duty and customs duty has shown declining trends. It is also seen that decline in customs duty is higher than that of decline in excise duty. The customs duty has declined sharply from 3.7 per cent of GDP during 1985-90 to 1.3 percent during 2001-05. The data shows that tax structure of Central government is changing towards direct tax. But decline in indirect tax as a result of trade liberalization has not been compensated by increase in direct taxes. It can explain only a part of decline in Central government expenditure during the liberalisation period.

The development expenditure of the Central government has declined during the period of liberalization. While the non-development expenditure noted increasing trends. Within the development expenditure, the social expenditure as per cent of GDP has increased from 0.6 per cent of GDP in 1985-90 to 0.9 percent during 2001-05. On the other hand economic services expenditure has declined from 4.8 per cent of GDP to 3.8 per cent of GDP during the same period. The non-development expenditure such as pension payments and interest payments also increased during the period of analysis. As mentioned in literature, the compensation policies of the Central government can be the reasons for increased social and welfare expenditure during the period of liberalisation. The compensation effect hypothesis argues that government should increase its expenditure during the period of globalization.

Since our primary objective is to examine the relationship between openness and government size, the starting point is to see simple correlation between the two. However, government size may respond to openness with a lag, we also see the correlation between government size and openness with a one year lag.

The table 4.2 and 4.3 show that openness is negatively correlated with the size of Central government. This indicates that globalization might have reduced the size of government expenditure. Since our objective is to analyse the relationship between openness, government size and transfer, the simple correlation between openness, government size and transfers has also been examined.

Table 4.2: Correlation between Openness, Government Size and Federal Transfer

| Variable | LOCGV | LOPEN | LOTRF |
|----------|-------|-------|-------|
| LOCGV | 1 | | |
| LOPEN | -0.82 | 1 | |
| LOTRF | 0.37 | -0.13 | 1 |

The period of analysis is 1980-81 to 2005-06. It can also be seen from the table 4.2 that while the correlation between the size of central government (LOCGV) and transfer (LOTRF) is positive, the correlation between openness (LOPEN) and transfer from Centre to State is negative. The estimated correlation

defined net of transfers or not?

coefficient between openness and transfer from Centre to States is -0.13, which indicates that openness reduced transfer from Centre to State via reduction in size of central government. But the transfer from centre has reduced relatively less than that of size of Central government during the period of analysis (See Table 4.1).

The two correlations are not directly comparable

Table 4.3: Correlation between Lag in Openness and Government Size (with one-year lag on openness)

| Variable | LOCGV | LOPEN | LOTRF |
|----------|-------|--------|-------|
| LOCGV | 1 | | |
| LOPEN-1 | -0.48 | 1 | |
| LOTRF | 0.37 | -0.077 | 1 |

The estimates in table 4.3 shows that the correlation coefficient between lagged variable of openness and size of government is -0.48, which is less than the contemporaneous effect of openness on the size of government (-0.82).

See comment above

Figure 4.2 Comovement of Variables: Size of government with Openness, Real GDP Per Capita and Urbanization

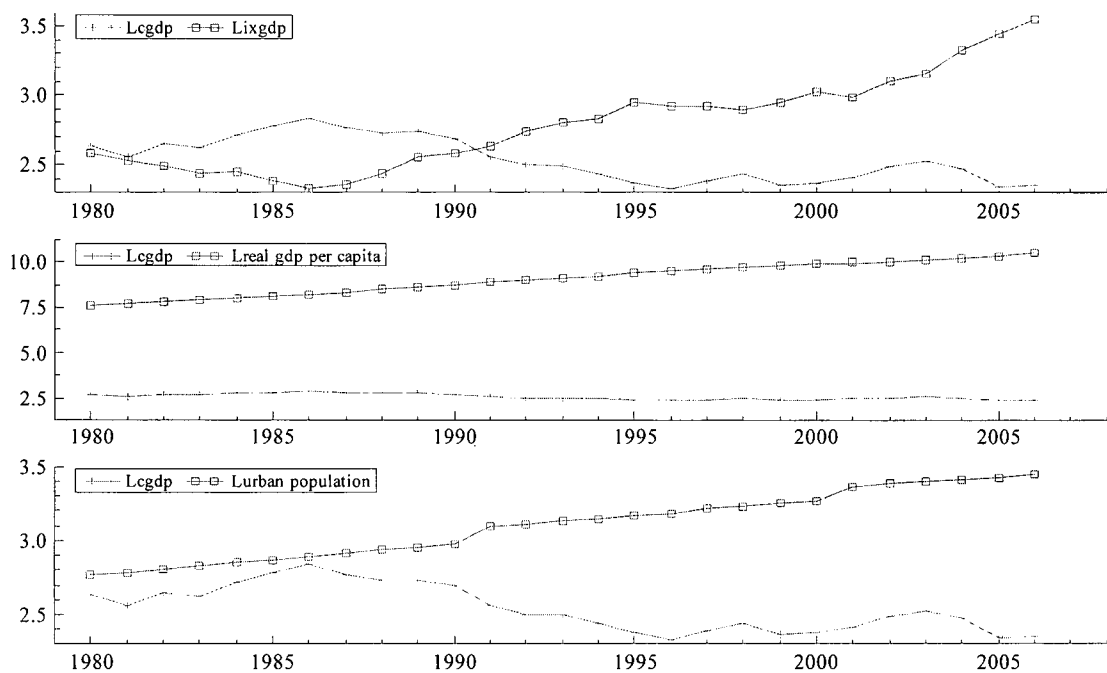


Figure 4.2 shows the comovement between government size with openness, per capita income and urbanisation. The relationship between the size of central government and openness seems to be negative, as the government expenditure to GDP ratio showed a decline with increasing openness, despite a crossover point close to the liberalisation period. The central government size and urbanisation

(measured as urban population as a percentage of total population) are moving in the opposite direction after a point of convergence in mid eighties, reflecting a possible negative association between the two. The comovement of percapita GDP and government size is difficult to decipher from the graphical plots. Prima facie, the graphical plots provide an indication that the variables are not stationary at levels. In the next section we examine econometrically the relationship between openness and government size.

4.3: Econometric Estimation

The starting point of analysing the time series properties is to identify the presence of unit-root in the series¹. In order to uncover a true relationship among time series variables, it is essential to check for non- stationarity or the presence of unit roots in the time series variables². Testing of unit root involves the testing of order of integration of the data series. A series X_t is said to be integrated of order d , denoted by

$$X_t \sim I_t(d)$$

If it becomes stationary after differentiating d times and thus X_t contains d unit roots. Using the Augmented Dickey Fuller (ADF) methodology³, the fundamental regression equation to test unit roots is,

$$\Delta y_t = \alpha_0 + \alpha_1 t + \gamma y_{t-1} + \sum_{i=1}^k \beta_i \Delta y_{t-i} + \varepsilon_t$$

The null hypothesis of unit root is accepted if $\gamma = 0$. If the null hypothesis $\alpha_1 = \gamma = 0$ is rejected, the series is trend stationary.

¹ The conventional method of regression of time series variables that are non-stationary often leads to the problem of spurious regression. The regression co-efficient of variables that are non-stationary shows statistically significant results, which actually does not exhibit any relationship. So, it is essential to identify the presence of unit root in the time series or non-stationarity in the variables under study.

² Granger and Newbold (1974), has reported that the time series that is non-stationary provides statistically significant results with high R^2 (goodness of fit) and very low DW (Durbin-Watson is the standard test for detecting serial correlation) statistic; indicating high auto -correlation among residuals. But the results gets reversed when stationary variables were used showing that in actual terms, there existed no relationship between the variables and the results obtained earlier are spurious.

³ One of the major problem of the ADF test is that the selection of appropriate lag length. Including too many lags reduces the power of the test to reject the null hypothesis since the increased number of lags require the estimation of additional parameters and loss of degrees of freedom. On the other hand, too few lags will not capture the actual error process. The approach suggested for the selection of appropriate lag length is to start with a relatively long lag length and pare down to the model by the usual t-test and/or F-test. Thus, one can estimate the equation using a lag length of n^* . If the t-statistics is insignificant in the lag n^* , repeat the procedure until the lag is significantly different from zero.

The unit root test results of size of government (*lsize*) and its a priori determinants viz., measure of openness (*lopen*), measure of urbanization (*lurb*), real per capita GDP (*lpcgdp*), all in logarithmic forms, are presented in the table 4.4. The unit root test reveals that all the variables are integrated of order two.

Table 4.4: Unit root Test Results for Government Size and its Apriori Determinants

| Variables | t-ADF value | Order of Integration | Inference |
|---------------|-------------|----------------------|------------|
| <i>lsize</i> | -4.532* | 2 | Stationary |
| <i>lopen</i> | -3.880* | 2 | Stationary |
| <i>lurb</i> | -3.932* | 2 | Stationary |
| <i>lpcgdp</i> | -3.91* | 2 | Stationary |

Note: * denotes significance at 0.10 per cent level.

4.3.1: Estimation of the Model

Having established that the macrovariables under concern are stationary and have same order of integration at $I \sim (2)$, we proceed to estimate the model. The dependent variable, size of government, is defined as the primary government expenditure (total expenditure devoid of interest payments) to GDP ratio. As mentioned, the explanatory variables used in determining these relationships are openness, real per capita income, urbanization and lagged government expenditure. There are several indices for measuring the degree of trade openness; viz., (i) openness to trade measure as sum of import and export as the share of GDP (conventional method), (ii) the sum of absolute value of inflows and outflows of foreign direct investment and (iii) the measure refers to the restriction on capital account. Obviously openness is a broad concept that cannot be captured completely by the three indicators discussed above. However, some of the researchers used the index, which incorporates all the three variables. Due to the lack of long time series data on foreign direct investment, we used conventional measure of openness for the analysis, i.e., export plus import to GDP ratio. The model specifications are given in equations below. The period of analysis is 1980-81 to 2006-07.

4.3.1.1: Error Correction Model: Methodology

The standard method to derive the error correction model is to show that if X and Y are linear functions of a latent integrated process, the residuals of Y regressed on X should be stationary. To capture both the long run and the short run dynamics of openness on the size of government, we have estimated an error correction model (ECM) using the Engle-Granger (1987) methodology. A brief discussion of the methodology is as follows.

If two time series y_t and x_t are both integrated of order d (i.e. $I(d)$), then, in general, any linear combination of the two series will also be $I(d)$; that is, the residuals of Y regressed on X should be stationary. The economic interpretation of cointegration is that if two or more series are linked to form a long run equilibrium relationship, then even though the series themselves may be non-stationary, they will move closely together over time and their difference will be stationary. Their long run relationship is the equilibrium to which the system converges over time, and the disturbance term μ_t can be interpreted as the disequilibrium error or the distance that the system is away from equilibrium at time t . The Engle-Granger error correction model is estimated in two steps.

Step 1: Static Model

The first stage of Engle-Granger error correction model is to test whether the variables are cointegrated. This is accomplished by testing the residuals of the static model ($y_t = bx_t + \mu_t$) for stationarity.

Step 2: Dynamic Model

The second stage of the Engle-Granger procedure comprises of estimating the shortrun ECM itself from the residuals of the regression of the first stage. That is, having obtained μ_{t-1} , we estimate the equation to determine the dynamic structure of the system. The deviations from the long run path are captured at the second stage. The coefficient of the lagged residual term from the first stage suggests the magnitude and direction in which the system comes back to the long run path or adjusts. Therefore, there exists an error correction mechanism.

4.3.1.1: Estimation of Error Correction Model

As mentioned above, first we need to estimate the static model. The static model specified for the study is as follows.

$$lsize_t = a + \beta_1 lsize_{t-1} + \beta_2 lopen_t + \beta_3 lpcgdp_t + \beta_4 lurb_t + \mu_t$$

Where

$lsize_t$ = logarithm of Size of Central Government

$lsize_{t-1}$ = logarithm of lagged Size of Central Government

$lopen_t$ = logarithm of measure of openness

$lpcgdp_t$ = logarithm of real Per capita GDP

$lurb_t$ = logarithm of the measure of urbanization

μ_t = stochastic/error term

The error term of the static equation (μ_t) is tested for stationarity. The results of ADF showed that the residual is stationary, i.e., $I \sim (0)$.

Now we proceed to estimate the error correction model by incorporating the lagged value of the residual of the static model.

The error correction model thus specified for the study is as follows:

$$lsize_t = a + \beta_1 lsize_{t-1} + \beta_2 lopen_t + \beta_3 lpcgdp_t + \beta_4 lurb_t + \beta_5 ecm_{-1} + \mu_t$$

where ecm_{-1} is the error correction term and all the other variables are as defined in the static model.

The results from the econometric estimation of static model and dynamic model incorporating ECM are given in table 4.5.

Table 4.5: Openness and Size of Central Government

| Independent variables | (I) Static model | (II) Dynamic model [error correction model] |
|-------------------------------|---------------------------------------|--|
| <i>lsize_{t-1}</i> | 0.472910 (2.812) [0.01113] ** | 0.492912 (13.876) [0.00001] *** |
| <i>lopen_t</i> | -0.352873 (-2.320) [0.03161] ** | -0.337649 -10.759 [0.00001] *** |
| <i>lpcgdp_t</i> | 0.000201455 (1.147) [0.26556] | 0.000229888 (6.429) [0.00001] *** |
| <i>lurb_t</i> | 0.295675 (-0.846) [0.40790] | -0.00644037 (-0.123) [0.90309] |
| <i>ecm₋₁</i> | - | 0.945781 (20.651) [0.00001] *** |
| <i>Adjusted R²</i> | 0.54 | 0.98 |
| <i>DW</i> | 1.9 | 1.9 |
| <i>No. of observations</i> | 24 | 24 |

Note: The figures in parentheses denote T-statistics and squared parentheses denote P-values. *** denotes Significance at 0.01 per cent level.

The result shows that increase in openness is significant in influencing the size of central government. The corresponding 'β', which represents the coefficient of openness, is negative and significant (-0.337649) in the error correction model. This is quite consistent with the earlier result from the figure 4.1. As expected, the results show that lagged value of government size is an important determinant of the current expenditure of the government at central level. Both static and dynamic models illustrate that openness reduced the size of central government as the coefficient of openness in both models are negative and statistically significant at 0.01 level. Further, the results from error correction model show that the coefficient of growth variable, i.e., the real per capita income has significant positive influence on size of central government. However, the urbanisation variable remains insignificant in both models. The coefficient of error correction term showed that the system has to restore the long run equilibrium by 0.95 points.

4.4: Summary

The result from error correction model indicates that the openness has reduced the expenditure of Central government during the period of analysis, while controlled for other factors affecting the government size. One of the reasons may be the reduced revenue receipt of the government during globalization period, especially the reduction in customs duty and excise taxes at the Central level. However, the links between per capita GDP and expenditure at central government level are positive and significant in the error correction model. The result from the error correction model has significant implications in terms of the federal transfer from Centre to States and in turn the subnational public finances.

Chapter V

WIDENING DISPARITIES IN GOVERNMENT EXPENDITURE: AN INTER STATE COMPARISON

Introduction

In the previous chapter it has been proved that openness has reduced the size of government, measured in terms of public expenditure to GDP ratio. In this chapter, we examine what the reduction in government size means in terms of revenue and expenditures, particularly its implications for the subnational governments. In this context it needs to be highlighted that impact of globalization on state government's expenditure would not be uniform across States. It would be safe to assume that the state with higher tax base would be in a better position to absorb shocks of globalization-induced reduction in government size due to larger revenue mobilization, which may not be true in the case of low-income states. This in turn can result in widening of disparity in government spending across the states.

This chapter has been divided into following sections. Section 5.1 deals with the review of literature on the regional disparity in India. Section 5.2 discusses the disparity in expenditure across the states as to probe whether disparity in spending has widened with openness; while Section 5.3 examines the revenue raising behavior to see how revenue capacity differs across the states. In section 5.4, a detailed analysis of nature of transfer to different states is undertaken to draw inferences on the nature of transfers, while section 5.5 summarizes and concludes.

5.1: Review of Literature on Regional Inequality in India

Regional inequality is a multidimensional area and a number of studies have looked at the trends in regional inequality among the sub-national regions of the Indian economy. There are various dimensions for regional inequality, while this review is focused only on the literature which deals with the regional inequality in income. The most influential study in the context is Ahluwalia (2000), which showed that inequality in real per capita gross state domestic product has tended to rise particularly in the 1990s. Confirming the rise in trend of disparity, Shetty (2003), Rao et al (1999), Bhattacharya and Sakthivel (2004) and Dadibhavi et al (2006) also observed that

regional disparity has accentuated in the 1990s as compare to 1980s. Nagaraj et al (1998) found that coefficient of variation of per capita SDP had reduced in 1960s, but the regional disparity had increased in the following decade and it continued to grow during the first half of the 1990s. Kar and Sakthivel (2007) attributed rising regional inequality during 1990s to the sharp rise in inequality in industrial and service sectors. Nayyar (2008) identified that per capita private investment, literacy rate, infant motility rate and per capita public investment as the important determinants of states' steady-state income. He also argued that the first three variables could be significantly influenced by the fourth, which is a policy driven variable, thereby implying that state government can play an important role in enhancing their own growth process.

The important issue here is whether increasing inequality in GSDP can be the result of increasing inequality in revenue raising capacity across the states and thereby increasing inequity in public expenditure across the states. The hypothesized divergence in per capita public expenditure across the states has become a serious issue especially in the context when studies found that public investment have significant effect on the socio-economic variables including growth of private investment and literacy rate (Nayyar 2008).

5.2: Disparity in Per capita Expenditure

The table 5.1 demonstrates increase in coefficient of variation (CV) of per capita primary expenditure across fourteen major states in India. Although, the mean per capita expenditure has increased in absolute amount by eighteenfold, between 1980-81 and 2007-08, the disparity in spending has also increased during the same period. The increase in the per capita expenditure of low-income states like Bihar, Orissa, Madhya Pradesh and Rajasthan was far less than that of high income States like Gujarat, Haryana, Maharashtra and Punjab. The per capita expenditure of Bihar increased from Rs 243.1 in 1980-81 to Rs 3217 in 2007-08. In the case of Madhya Pradesh per capita expenditure has increased from Rs 292.7 in 1980-81 to Rs 4382 in 2007-08. While, the per capita expenditure of Haryana and Punjab increased from Rs 445. 9 and Rs 453.3 to Rs 8194 and Rs 8711 respectively.

Table 5.1: Coefficient of variation of per capita expenditure across the States (in Rs)

| States / year | 1980-81 | 1985-86 | 1990-91 | 1995-96 | 2000-01 | 2007-08 |
|----------------|---------|---------|---------|---------|---------|---------|
| Andhra Pradesh | 287.9 | 544.9 | 909.0 | 1782.1 | 3199.0 | 8498.8 |
| Bihar | 243.1 | 355.4 | 638.2 | 785.6 | 1535.3 | 3217.0 |
| Gujarat | 407.0 | 648.8 | 1295.2 | 2098.9 | 4792.2 | 6093.8 |
| Haryana | 445.9 | 841.8 | 1299.4 | 2312.6 | 3717.6 | 8194.7 |
| Karnataka | 337.3 | 667.1 | 1014.5 | 1906.1 | 3283.9 | 7783.9 |
| Kerala | 319.4 | 679.1 | 1033.2 | 1921.7 | 3403.4 | 7676.2 |
| Madhya Pradesh | 292.7 | 479.9 | 822.4 | 1287.2 | 2403.6 | 4382.3 |
| Maharashtra | 401.9 | 783.7 | 1260.5 | 2214.0 | 3843.7 | 6539.3 |
| Orissa | 315.3 | 448.8 | 855.4 | 1358.6 | 2397.9 | 4955.3 |
| Punjab | 453.7 | 996.2 | 1522.6 | 2480.9 | 4523.8 | 8711.6 |
| Rajasthan | 307.9 | 494.6 | 950.9 | 1770.3 | 2532.7 | 4721.0 |
| Tamil Nadu | 331.1 | 602.6 | 1106.9 | 1901.7 | 3430.7 | 7780.8 |
| Uttar Pradesh | 228.9 | 405.9 | 785.3 | 1062.1 | 1793.2 | 4197.0 |
| West Bengal | 266.8 | 448.5 | 800.5 | 1196.9 | 2687.7 | 4091.4 |
| SD | 71.0 | 182.8 | 248.7 | 506.1 | 948.5 | 1907.1 |
| MEAN | 331.3 | 599.8 | 1021.0 | 1719.9 | 3110.3 | 6203.1 |
| CV | 21.4 | 30.5 | 24.4 | 29.4 | 30.5 | 30.7 |
| MAX/MIN | 2.0 | 2.8 | 2.4 | 3.2 | 3.1 | 2.7 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

The table 5.1 also shows that coefficient of variation in per capita spending has increased sharply during the period of analysis. The coefficient of variation in State expenditure was 21.4 in 1980-81, which increased to 24.4 in 1990-91. Since nineties, there has been a clear increase in the expenditure across the States. In 2005-06 and 2007-08 the coefficient of variation became 30.5 and 30.7 respectively. The maximum and minimum ratio of public expenditure across the state over the years has also increased from 2.0 in 1980-81 to 2.7 in 2007-08 indicating the sign of widening inequality in public expenditure. This increase in disparity in spending is in coincidence with the period of openness.

Table 5.2: Coefficient of variation of Per Capita Developmental Expenditure across the States (in Rs)

| States / year | 1987-88 | 1991-92 | 1995-96 | 2000-2001 | 2005-2006 | 2007-2008 |
|----------------|---------|---------|---------|-----------|-----------|-----------|
| Andhra Pradesh | 477.8 | 741.0 | 1305.5 | 2241.3 | 3610.9 | 5961.0 |
| Bihar | 331.3 | 429.2 | 540.0 | 914.3 | 1238.7 | 2124.4 |
| Gujarat | 733.0 | 1127.3 | 1632.2 | 3747.3 | 3867.5 | 4436.8 |
| Haryana | 650.1 | 982.3 | 1664.8 | 2612.1 | 4081.9 | 5852.5 |
| Karnataka | 495.1 | 922.0 | 1411.5 | 2364.6 | 4038.0 | 5840.1 |
| Kerala | 467.8 | 765.7 | 1283.0 | 2178.1 | 3157.2 | 4061.9 |
| Madhya Pradesh | 451.8 | 674.7 | 938.8 | 1695.0 | 2764.7 | 2958.4 |
| Maharashtra | 570.1 | 894.0 | 1502.5 | 2747.7 | 3801.6 | 4451.7 |
| Orissa | 710.6 | 1161.7 | 1589.5 | 2244.6 | 1978.8 | 2991.9 |
| Punjab | 394.8 | 1083.1 | 940.6 | 1759.3 | 3398.8 | 5495.2 |
| Rajasthan | 562.4 | 867.1 | 1335.5 | 1754.1 | 2757.2 | 3459.8 |
| Tamil Nadu | 497.6 | 1251.8 | 1330.4 | 2231.4 | 3252.4 | 4965.8 |
| Uttar Pradesh | 333.6 | 485.3 | 657.8 | 1080.0 | 1733.0 | 2919.9 |
| West Bengal | 421.2 | 659.2 | 1072.7 | 2172.2 | 1905.6 | 2461.0 |
| Mean | 507.0 | 860.3 | 1228.9 | 2124.4 | 2970.4 | 4141.5 |
| C V | 24.9 | 29.0 | 28.7 | 33.0 | 31.4 | 32.4 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

The table 5.2 indicates that whether disparity is due to variation in development expenditure or in non-development expenditure across the states. The table shows that coefficient of variation in per capita development expenditure across the states is increasing during 1987-88 to 2007-08. The coefficient of variation in development expenditure increased from 24.9 in 1987-88 to 32.4 in 2007-08. The state like Bihar, Uttar Pradesh, Rajasthan, Orissa and Madhya Pradesh are far behind in per capita development expenditure than Maharashtra, Punjab, Haryana and Gujarat. The per capita development expenditure of Bihar is Rs 2124, lowest among the Indian states in 2007-08. While per capita development expenditure of Haryana and Punjab is Rs 5852 and Rs 5495 respectively in 2007-08. It is a serious issue for concern that differences in public expenditure across the state are reflected in difference in the development expenditure across the states, which include expenditure on education, health, infrastructure etc.

5.2.1: Growth of Public Expenditure across the States

The growth of per capita public expenditure has been calculated by using regression method. The period of analysis is subdivided as 1980-1990 and 1991-2008. The equation for computing growth rate is given as:

$$\text{Log } Y_t = a + \beta T + u_t$$

where, Y_t = per capita public expenditure;

B = growth rate;

T = time

Table 5.3: Growth rate of Per capita public expenditure across the States during 1980-1990 and 1991-08 (percent per annum)

| States / year | 1980-81 to 1989-90 | 1990-91 to 2007-08 |
|----------------|--------------------|--------------------|
| Andhra Pradesh | 11.26 | 11.27 |
| Bihar | 11.09 | 11.04 |
| Gujarat | 11.23 | 10.99 |
| Haryana | 11.10 | 11.13 |
| Karnataka | 11.17 | 11.17 |
| Kerala | 11.21 | 11.22 |
| Madhya Pradesh | 11.11 | 11.02 |
| Maharashtra | 11.18 | 11.05 |
| Orissa | 11.08 | 10.64 |
| Punjab | 11.27 | 11.30 |
| Rajasthan | 11.16 | 10.92 |
| Tamil Nadu | 11.18 | 11.10 |
| Uttar Pradesh | 11.23 | 11.05 |
| West Bengal | 11.17 | 10.95 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

The table 5.3 shows that lower income state such as Bihar, Madhya Pradesh, Rajasthan, Orissa and West Bengal had shown a decline in the growth rate of per capita expenditure during 1991-2008 as compared 1980-90. On the other hand, states like Andhra Pradesh, Haryana, Kerala Punjab and Tamil Nadu showed an increasing trend in growth of per capita expenditure during post-globalization period as compared with pre-globalization period. Not only that the per capita income at initial level is low among low income states, but also the growth in per capita expenditure is also showing a declining trend. The higher income states and middle income states have relatively less decline in the growth of public expenditure during post globalization period.

These are hardly significant except in Orissa, WB and Gujarat

Table 5.4: Cross-Classification of States According to Growth rate of Public Expenditure

| Increase in per capita Public expenditure | Decline in per capita Public expenditure | Stagnant per capita Public expenditure |
|--|---|--|
| Andhra Pradesh, Haryana, Kerala, Punjab and Tamil Nadu | Bihar, Madhya Pradesh, Rajasthan, Gujarat, Maharashtra, Orissa, Uttar Pradesh and West Bengal | Karnataka |

The reasons for the difference in per capita public expenditure can be due to the difference in own revenue receipts of the States and also could be due less progressive transfers from Centre to States. In the next two sections, we examine disparity in own revenue and central transfers to the states.

5.3: Inequality in Own Revenue Receipts across the States

The growth of GSDP and growth of own revenue are correlated in the sense that when GSDP is increasing it should increase the tax base of the States and in turn result in higher own revenue receipts. In this context, as discussed in chapter III we may recall, that there has been widening disparity in per capita income across the states during the post reform period, which would have its bearing on own revenues. The table 4.10 gives own revenue profile across the states and disparities there on.

Table 5.5: Coefficient Variation of Per capita Own Revenue across the States (in Rs)

| States / Year | 1980-81 | 1985-86 | 1991-92 | 1995-96 | 2001-2002 | 2007-2008 |
|----------------|---------|---------|---------|---------|-----------|-----------|
| Andhra Pradesh | 151.7 | 309.1 | 600.4 | 799.0 | 1898.5 | 4691.0 |
| Bihar | 53.6 | 138.7 | 193.3 | 303.1 | 308.0 | 573.1 |
| Gujarat | 212.4 | 373.1 | 692.9 | 1178.2 | 1822.9 | 3739.2 |
| Haryana | 275.9 | 525.6 | 1031.5 | 1574.3 | 2950.6 | 6391.8 |
| Karnataka | 184.2 | 349.9 | 770.0 | 1324.3 | 2065.5 | 5016.5 |
| Kerala | 171.9 | 321.7 | 569.8 | 1098.1 | 1860.3 | 4112.1 |
| Madhya Pradesh | 125.8 | 225.7 | 471.3 | 723.4 | 1019.9 | 2057.7 |
| Maharashtra | 251.8 | 484.6 | 965.1 | 1570.0 | 2665.5 | 4762.5 |
| Orissa | 101.6 | 145.5 | 291.9 | 514.7 | 858.2 | 2086.8 |
| Punjab | 328.7 | 532.2 | 1553.9 | 1808.2 | 2431.0 | 4813.9 |
| Rajasthan | 126.8 | 223.4 | 489.9 | 818.6 | 1270.6 | 2570.3 |
| Tamil Nadu | 181.0 | 342.0 | 861.2 | 1354.4 | 2321.9 | 5155.4 |
| Uttar Pradesh | 81.0 | 147.1 | 298.6 | 435.8 | 714.7 | 1820.0 |
| West Bengal | 123.8 | 217.7 | 390.0 | 600.0 | 908.8 | 1802.3 |
| | | | | | | |
| Mean | 169.3 | 309.7 | 655.7 | 1007.3 | 1649.7 | 3542.3 |
| CV | 45.6 | 43.8 | 55.4 | 47.1 | 49.0 | 48.1 |
| MAX/MIN | 6.1 | 3.8 | 8.0 | 6.0 | 9.6 | 11.2 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

It is evident from the table 5.5 that, like revenue expenditure, even though mean per capita own revenue increased sharply in recent years, there has been increasing disparities in own revenue mobilization. The per capita own revenue of Bihar was Rs 53.6 in 1980-81, which increased to Rs 308 and Rs 573.1 in 2001-02 and 2007-08. On the other hand the own revenue of Haryana and Punjab increased from Rs 275 and Rs 328 in 1980-81 to Rs 6391 and Rs 4813 in 2007-08.

The coefficient of variation in per capita own revenue across the states increased from 45.0 in 1980-81 to 49.0 and 48.1 in 2006-07 and 2007-08 respectively. It is to be noted here that disparity in per capita own revenue is much higher than the per capita expenditure, implying that transfer system to an extent has helped in reducing expenditure disparities across the states.

Doesn't this contradict what is stated earlier?

5.3.1: Growth Rate of Own Revenue

The trends in rate of growth of own revenue to that of GSDP across the states is compared in the table 5.6. The coefficient of variation in growth of own revenue has increased from 16.5 during 1980-1990 to 20.4 during 1991-2008. The coefficient of variation of GSDP growth also increased from 5.1 to 19.0 during the same period indicating that growth rate of per capita own revenue and per capita GSDP are correlated.

Table 5.6: Compound rate of growth of Own Revenue and GSDP across the States (per cent per annum)

| States / year | Own Revenue | | GSDP | |
|----------------|--------------------|--------------------|--------------------|--------------------|
| | 1980-81 to 1989-90 | 1990-91 to 2007-08 | 1980-81 to 1989-90 | 1990-91 to 2007-08 |
| Andhra Pradesh | 11.41 | 11.3 | 11.14 | 11.19 |
| Bihar | 11.62 | 10.54 | 11.1 | 10.71 |
| Gujarat | 10.99 | 11.02 | 11.09 | 11.14 |
| Haryana | 11.23 | 11.19 | 11.1 | 11.19 |
| Karnataka | 11.24 | 11.2 | 11.14 | 11.15 |
| Kerala | 10.96 | 11.27 | 11.08 | 11.32 |
| Madhya Pradesh | 11.18 | 10.96 | 11.08 | 10.87 |
| Maharashtra | 11.28 | 11 | 11.12 | 11.04 |
| Orissa | 11.08 | 10.87 | 11.03 | 10.77 |
| Punjab | 10.9 | 11.37 | 11.17 | 11.42 |
| Rajasthan | 11.12 | 11.03 | 11.1 | 10.99 |
| Tamil Nadu | 11.18 | 11.22 | 11.26 | 10.86 |
| Uttar Pradesh | 11.18 | 11.1 | 11.04 | 10.87 |
| West Bengal | 11.25 | 10.78 | 11.12 | 11.14 |
| SD | 0.2 | 0.2 | 0.1 | 0.2 |
| Mean | 11.2 | 11.1 | 11.1 | 11 |
| CV | 16.5 | 20.4 | 5.1 | 19 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

Table 5.7: Cross-Classification of States According to Growth rate of Own Revenue and GSDP

| | |
|---|---|
| States having low growth rate during 1991 to 2007 as compared with 1980-90. | States having low growth rate during 1991 to 2007 as compared with 1980-90. |
| Bihar, Andhra Pradesh, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal | Maharashtra, Bihar, Andhra Pradesh, Madhya Pradesh, Orissa, Rajasthan, Tamil Nadu and Uttar Pradesh |

Table 5.7 indicates that Bihar, Andhra Pradesh, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and West Bengal are the states having lower growth in per capita own revenue during 1991-2008 as compared with 1980-1990. On the same way, apart from Tamil Nadu and Maharashtra, Bihar, Andhra Pradesh, Madhya Pradesh, Orissa, Rajasthan, and Uttar Pradesh are the States that also have lower growth rate in per capita GSDP during 1990-2008 as compared with 1980-90 period. It is evident that the states such as Bihar, Madhya Pradesh, Rajasthan, Orissa and Uttar Pradesh have lower growth in both per capita own revenue and per capita GSDP during this period.

Table 5.8 Correlation coefficient of Per capita Own Revenue and Per Capita GSDP

| Variable | Per capita own revenue | Per capita GSDP |
|------------------------|------------------------|-----------------|
| Per capita own revenue | 1 | 0.31 |
| Per capita GSDP | 0.31 | 1 |

The correlation coefficient¹ of per capita own revenue and per capita GSDP shows that per capita own revenue is positively correlated with per capita GSDP. The estimated correlation coefficient is 0.31. Therefore we can conclude that the growing inequality in per capita GSDP is one of the reasons for growing inequality in per capita own revenues and thereby expenditure across the States across the States.

5.4: Inequality in the Distribution of Transfers

The second reason for the increase in inequality in expenditure may be due to the distribution of transfer from Centre to States. The table 5.8 explains the coefficient of variation of per capita transfer from Centre to States. Broadly the transfer from Centre to States is classified into two: tax devolution and grants from Centre.

The high co-variation of transfer implies that higher equalization impact of transfer and low co-variation may imply that low equalization impact of transfer. The coefficient of variation of per capita tax share from Centre to states showed an increasing trend from 8.4 in 1981-82 to 34.0 in 2001-02 and declined to 30.9 in 2007-08.

$$\rho_{xy} = \frac{\text{Cov}(r_x, r_y)}{\sigma_x \sigma_y}$$

¹ The correlation coefficient is calculated by using following the formula

The table 5.9, 5.10 and 5.11 explain that the coefficient of variation of per capita total transfer is declining in recent years. Although the low income States are receiving a larger portion of transfer from Centre, decline in the coefficient of variation of transfer indicates that the transfer system has not been able to offset the increase in disparities in per capita own revenue and thereby expenditure across the states. The per capita transfer from Centre is higher in the case of Bihar, Uttar Pradesh, Rajasthan, Madhya Pradesh and Orissa but over the years, the transfer to these states in total transfer declined (see chapter 3).

Table 5.9: Coefficient Variation of Per Capita Tax Devolution Centre to States (in Rs)

| Share in Central tax | 1981-82 | 1985-86 | 1991-92 | 1995-96 | 2001-02 | 2007-08 |
|----------------------|---------|---------|---------|---------|---------|---------|
| Andhra Pradesh | 61.5 | 98.3 | 192.8 | 357.6 | 532.9 | 1127.0 |
| Bihar | 67.9 | 110.7 | 211.1 | 366.0 | 730.0 | 1605.3 |
| Gujarat | 60.3 | 74.3 | 142.1 | 252.2 | 295.6 | 768.2 |
| Haryana | 51.9 | 59.2 | 131.5 | 195.8 | 212.3 | 565.7 |
| Karnataka | 59.1 | 86.9 | 172.2 | 295.0 | 496.4 | 1107.0 |
| Kerala | 66.5 | 76.9 | 196.2 | 336.6 | 507.0 | 1133.6 |
| Madhya Pradesh | 64.6 | 98.4 | 192.7 | 299.8 | 558.5 | 1219.8 |
| Maharashtra | 58.0 | 72.2 | 152.8 | 192.5 | 254.8 | 670.1 |
| Orissa | 67.9 | 96.3 | 259.7 | 376.8 | 719.7 | 1729.0 |
| Punjab | 54.4 | 62.5 | 143.1 | 200.5 | 250.6 | 702.2 |
| Rajasthan | 56.4 | 83.9 | 201.1 | 301.2 | 510.1 | 1261.8 |
| Tamil Nadu | 67.5 | 98.9 | 211.7 | 306.1 | 459.9 | 1153.0 |
| Uttar Pradesh | 63.3 | 100.0 | 194.3 | 326.3 | 601.0 | 1444.3 |
| West Bengal | 63.0 | 103.6 | 179.3 | 271.7 | 535.0 | 1169.2 |
| Mean | 61.6 | 87.3 | 184.3 | 291.3 | 476.0 | 1118.3 |
| CV | 8.4 | 18.4 | 18.6 | 21.3 | 34.8 | 30.9 |
| MAX/MIN | 1.3 | 1.9 | 2.0 | 2.0 | 3.4 | 3.1 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

The table 5.8 shows that per capita tax devolution to Bihar is Rs 1605 and Madhya Pradesh Rs 1219, Rajasthan Rs 1261, Uttar Pradesh Rs 1444 and Orissa Rs 1729 respectively in 2007-08. While the per capita tax shares of high income States like Gujarat is Rs 768, Haryana Rs 565, Maharashtra Rs 670 and Punjab Rs 702 respectively in 2007-08. It is interesting to note that middle income States like Andhra Pradesh, Karnataka, and Tamil Nadu have higher per capita transfer along with higher growth in own revenue. The per capita tax devolution to these states is Rs 1127, Rs 1107 and Rs 1153 respectively in 2007-08. These are the states, which are receiving the benefit of reforms (Srinivasan, 2006) and are also getting higher transfer from Centre.

The per capita transfer of resources to lower income states is higher in absolute term but it trends over the years is worsening. The table 4.14 shows that the coefficient of variation of tax devolution from Center to State has declined during the reform period. It can be attributed to new formula adopted by the Finance Commission. The Eleventh and Twelfth Finance Commission used Tax effort and Fiscal discipline as also the criteria for tax devolution (table 2. 3).

Table 5.10: Coefficient Variation of Per Capita Grants from Centre to States (in Rs)

| Grants | 1981-82 | 1985-86 | 1991-92 | 1995-96 | 2001-02 | 2007-08 |
|----------------|---------|---------|---------|---------|---------|---------|
| Andhra Pradesh | 30.7 | 61.3 | 141.4 | 221.3 | 435.0 | 919.9 |
| Bihar | 26.1 | 60.8 | 129.5 | 106.1 | 124.9 | 752.3 |
| Gujarat | 29.6 | 58.9 | 95.1 | 106.4 | 294.1 | 704.1 |
| Haryana | 30.1 | 79.6 | 105.5 | 162.1 | 242.6 | 588.9 |
| Karnataka | 24.8 | 54.7 | 103.9 | 120.4 | 331.3 | 1039.2 |
| Kerala | 28.5 | 107.1 | 124.9 | 152.1 | 306.3 | 811.5 |
| Madhya Pradesh | 33.4 | 50.7 | 138.6 | 158.8 | 242.1 | 795.4 |
| Maharashtra | 20.5 | 46.5 | 101.6 | 134.5 | 173.6 | 897.6 |
| Orissa | 60.9 | 86.9 | 213.7 | 249.3 | 337.1 | 1140.7 |
| Punjab | 25.6 | 105.6 | 114.1 | 142.8 | 220.6 | 1288.4 |
| Rajasthan | 49.6 | 81.1 | 213.6 | 235.4 | 370.1 | 678.3 |
| Tamil Nadu | 25.7 | 64.1 | 130.5 | 132.9 | 221.4 | 477.1 |
| Uttar Pradesh | 38.3 | 67.0 | 168.0 | 149.9 | 194.1 | 626.1 |
| West Bengal | 21.7 | 68.0 | 108.8 | 121.0 | 366.5 | 585.0 |
| Mean | 31.8 | 70.9 | 135.0 | 156.7 | 275.7 | 807.5 |
| CV | 35.0 | 26.6 | 28.6 | 29.6 | 31.6 | 28.5 |
| MAX / MIN | 3.0 | 2.3 | 2.2 | 2.4 | 3.5 | 2.7 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

As compared with tax devolution, the per capita grants to lower income states are low in absolute terms. Apart from this, it also seen that coefficient of variation of grants from Centre to State are declining over the years indicating that lower income states are getting less amount of transfer from Center to States. The coefficient of variation of transfer from Centre to State declined from 35.0 in 1980-81 to 28.5 in 2007-08. In per capita terms Punjab and Karnataka are receiving transfer of more than Rs 1000 in 2007-08. On the other hand, Bihar and Uttar Pradesh is getting Rs 752 and Rs 626 per capita grants respectively in 2007-08. The declining co-variation in grants from Center to State in recent years can be attributed to increase in conditionality on state plan grant and non-plan non statutory grants from the Center (figure 3. 6).

Table 5.11: Coefficient Variation of total transfer from Centre to States (in Rs)

| State / year | 1981-82 | 1985-86 | 1991-92 | 1995-96 | 2001-02 | 2007-08 |
|----------------|---------|---------|---------|---------|---------|---------|
| Andhra Pradesh | 92.2 | 159.6 | 334.2 | 578.9 | 968.0 | 2046.8 |
| Bihar | 94.0 | 171.6 | 340.6 | 472.1 | 854.9 | 2357.6 |
| Gujarat | 89.9 | 133.1 | 237.2 | 358.6 | 589.7 | 1472.3 |
| Haryana | 81.9 | 138.7 | 237.1 | 357.9 | 455.0 | 1154.6 |
| Karnataka | 84.0 | 141.6 | 276.2 | 415.4 | 827.7 | 2146.2 |
| Kerala | 94.9 | 184.0 | 321.1 | 488.7 | 813.3 | 1945.1 |
| Madhya Pradesh | 98.0 | 149.1 | 331.4 | 458.6 | 800.6 | 2015.2 |
| Maharashtra | 78.5 | 118.8 | 254.3 | 327.0 | 428.4 | 1567.6 |
| Orissa | 128.7 | 183.2 | 473.4 | 626.1 | 1056.7 | 2869.7 |
| Punjab | 80.0 | 168.2 | 257.2 | 343.3 | 471.3 | 1990.5 |
| Rajasthan | 106.0 | 165.0 | 414.7 | 536.6 | 880.2 | 1940.1 |
| Tamil Nadu | 93.2 | 163.0 | 342.2 | 439.0 | 681.3 | 1630.1 |
| Uttar Pradesh | 101.7 | 167.0 | 362.3 | 476.2 | 795.1 | 2070.5 |
| West Bengal | 84.7 | 171.6 | 288.1 | 392.7 | 901.5 | 1754.2 |
| Mean | 93.4 | 158.2 | 319.3 | 447.9 | 751.7 | 1925.8 |
| CV | 14.0 | 12.2 | 21.4 | 20.1 | 26.2 | 21.5 |
| MAX / MIN | 1.6 | 1.5 | 2.0 | 1.9 | 2.5 | 2.5 |

Source: Handbook of Statistics on State Finance, RBI (various issues) and National Account Statistics, CSO

We can conclude that both tax devolution and per capita grants are flowing in favor of middle income and higher income states during the reform period. Over the years, low income states are receiving less per capita tax devolution and grants from Centre. Among total transfers, per capita grants are showing less equalization impact indicating larger coefficient of variation.

5.4.1: Equalizing Impact of Per Capita Transfers: Econometric Investigation

In a progressive transfer system there exist a negative relationship between per capita transfer and per capita income among the States. In this section we try to measure the equalization effect of statutory grants, state plan grants and discretionary grants by taking per capita GSDP as explanatory variable. It is clear from the exploratory data analysis (presented in tables 3.8, 3.9, 3.10, 5.9, 5.10 and 5.11) demonstrate that in recent years, the trend in transfer is in favor of high-income states.

Using Fixed Effects model of pooled least squares, the link between per capita transfers and GSDP has been examined. In this model, we estimate a simple linear model as follows:

Fixed Effects Model

$$y_{it} = a + \beta x_{it} + u_{it}$$

for $i = 1, 2, \dots, N$ and $t = 1, 2, \dots, T$

y_{it} = log of per capita fiscal transfer variables for State i in period t .

x_{it} = log of GSDP for State i in period t .

Where a is a scalar and β is a $K \times 1$ vector of coefficients to be estimated. For our sample, $N = 14$ and $T = 7$. Note that we assume that the coefficients are fixed and constant. For this model the ordinary least squares estimates will be consistent and efficient, if $E(x'_{it}u_{it}) = 0$.

Three models are estimated with variants of y_{it} , viz., $STAT_{it}$ (logarithm of Statutory Transfer); SPG_{it} (logarithm of State Plan Grants) and DGT_{it} (logarithm of Discretionary grant transfers) respectively to look at how the various forms of transfers are related with per capita GSDP across 14 states during the period 1999-2000 to 2005-2006. Fixed effects regression model is used to control for omitted variables that differ between cases but are constant over time. The per capita GSDP will take care of effect of both population and SDP among the States. We specify the model as follows:

Models

$$STAT_{it} = a + \beta GSDP_{it} + u_{it}$$

$$SPG_{it} = a + \beta GSDP_{it} + u_{it}$$

$$DGT_{it} = a + \beta GSDP_{it} + u_{it}$$

Where

$STAT_{it}$ = logarithm of Statutory Transfer

SPG_{it} = logarithm of State Plan Grants

DGT_{it} = logarithm of Discretionary Grants

$GSDP_{it}$ = logarithm of Gross State Domestic Product

Table 5.12: Equalizing Effect of Per Capita Transfer from Centre to States

| Independent Variable: $GSDP_{it}$ | | | | |
|-----------------------------------|--------------------|----------------------|----------------|------------------------|
| Model | Dependent variable | Coefficient | Standard Error | Number of observations |
| I | $STAT_{it}$ | 0.8550758* (6.96) | 0.1227833 | 98 |
| II | SPG_{it} | 0.9027951* (5.85) | 0.1543209 | 98 |
| III | DGT_{it} | 1.116508* (8.7) | 0.1282641 | 98 |

Note: * denotes significance at .10 per cent level. The figures in parentheses denote Z statistics.

For the econometric estimation, we have divided the intergovernmental transfers on the basis of the institution governing it. The statutory transfer is completely determined by Finance Commission. The Planning Commission governs the state plan grants. The discretionary grants include Central Plan grants and Centrally Sponsored Schemes. The Central Plan grants are determined by Planning Commission whereas Centrally Sponsored Schemes is determined by various Ministries.

The results from Fixed Effects Model reveal that all the three channels of transfers are positively associated with per capita income of the states. Even the statutory transfers have shown positive association with GSDP but its regression coefficient is lower as compared to plan and discretionary transfers. The coefficient of per capita discretionary grants is high indicating that larger share of per capita discretionary grants may be going to higher income states. It is important to note that irrespective of the fact that three forms of transfer are governed by different institutions, they are going in favour of higher income states and difference in equalization effect is also marginal. All the results are statistically significant. The reason for positive association between per capita GSDP and per capita transfers can be due to following reasons: the increase in the conditionality on plan transfers (figure 3.6) and second, the introduction of tax effort and fiscal discipline as criteria for resource devolution recently in Finance Commission transfers (table 2.3).

5.5: Summary

The study finds that there is widening inequality in per capita own revenue and thereby expenditure. The inequality in per capita development expenditure also showed a rising trend across the states over the years. The study also finds that the increase in the coefficient of variation in own tax revenue and transfer from the centre

There results may not be empirically sound. Too many variables are involved but ignored in particular one cannot accept the coefficient values estimated without reservation.

to State are the main reasons for increase in expenditure inequality across the states. As discussed in the chapter, existing literature showed that private investment, literacy rate and infant mortality rate are positively related with public investment. In this context, the growing disparity in public expenditure is a serious issue to be concerned. The study also showed that there is positive correlation between per capita own revenue and per capita GSDP indicating that those state which have higher per capita income are able to mobilise more revenue. It is also doubtful that current form of transfer from Centre to States is not able to mitigate the increase in inequity across the states.

The estimates from Fixed Effects model reveal that the statutory transfers - tax share plus non-plan grants - has positive link to GSDP but its regression coefficient is less as compared to state plan grants and discretionary transfers. It is further revealed that the state plan grants and discretionary grants are moving in favor of higher income states. The reasons may be that the state plan grants and discretionary grants are not based on formula but based on adhoc conditional principles, which are hardly economic factors. The recently increased conditional element in state plan grant and the adoption of tax effort and fiscal discipline as criteria for tax devolution by the Finance Commission may lead to less progressiveness of transfers from Centre to State. Empirical evidence also found support for higher income states receiving larger per capita transfers.

Chapter VI

CONCLUSION

It has been widely discussed in literature whether globalization has any effect on the size of government. There are two contrasting theoretical views on this. On the one hand it is argued that increasing integration of international market has a negative effect on the size of the government as the governments loses their monopoly of coercion and find them in a situation of strategic interaction with their counterpart elsewhere. On the other hand, it is argued that international integration increases the size of government by increase in spending on social security and other welfare programmes to mitigate international volatility of income. The present study examined whether, openness has any impact on the size of governments and in turn on federal transfers in India, where openness is defined as the total trade to GDP ratio. In the backdrop of declining volume of transfers to the states, we have examined whether openness has a negative effect on the volume of transfers to the states. The study also has examined the changing contour of intergovernmental fiscal transfer system and examined whether disparity in spending across states has increased in recent years with increasing globalization.

The first chapter discussed the theoretical and empirical literature on impact of openness on government size. A clear explanation of impact of globalization on government size through efficiency and compensation measures has been discussed in detail. This chapter also discussed critically how globalization measures changed federal fiscal structure in India. The study hypothesized that openness reduced the size of central government and thereby transfers from centre to states. It is also argued that the globalization may have had differential impact on government expenditures at state level. Widening revenue-raising capacity across state governments due to widening disparity in income and conditionality driven less progressive transfer-system can be the reason for such widening disparity.

We have presented a brief account on evolution of federalism in India, which provided the basis for understanding, how globalization changed the federal fiscal structure in India. The review of exiting literatures reveals various deficiencies in the existing federal fiscal transfer system. The important among them are criteria for devolution, discretionary element in Planning Commission transfers, multiple agencies of transfers, gap filling approach adopted by the Finance Commission, widening vertical and horizontal inequality, lack of efficiency in federal system and limited power of local government. The review shows that during the period of globalization, reforms policies were initiated in two directions: one in order to ensure efficiency and second to compensate the losers of globalization. Within the framework of efficiency measure there were cut in direct and indirect tax in order to broaden the tax base and to provide incentive for manufacturing sector to compete in the international market. The trade taxes were reduced in order to smoothen the process of international integration of Indian economy. Efficiency measures also included reforms of public sector enterprises and debt restructuring programmes. As compensation measures, central and state government introduced several programmes in the area of social and welfare expenditure like education, health and rural development with huge allocation in the budget. Recent flagship central programmes like SSA, NREGA, NRHM may be taken as further evidence towards that.

To start with the empirical issues, we have undertaken a critical analysis of state finances in the third chapter by dichotomizing the period into before and after the introduction of Fiscal Responsibility Act (FRA). Before the introduction of FRA, revenue, fiscal and primary deficit of both central and state governments have increased sharply, while the developmental capital expenditure showed a declining trend. The study showed that the revenue deficit improved in the years followed by the introduction of fiscal rules. The outstanding debt and the average cost of debt have shown a decline due to the softening of interest rate and measures like debt swap schemes in recent years. But the expenditure on social and economic service declined and the expenditure on general services, interest payment and pension, roughly remained the same during recent years indicating that state government achieved the fiscal target partly by reducing development expenditure. A shift in the sources of financing of debt of the state governments was also noted in favor to market borrowing.

There has been an increase in vertical imbalance during and after 1990s. This is particularly due to decline in the Central transfers during the 1990s. Secondly there was also a clear sign of increase in conditionality on transfer from Center to States. Conditional part in State plan grant by Planning Commission has increased in recent years. Discretionary grants also showed an increasing trend. The distribution of state plan grants and discretionary grants across the States illustrate that the share of high income states in total discretionary transfers has been increasing with a corresponding decline in the share of low income States.

In chapter four we examined econometrically the impact of globalization on government size for the period. The econometric estimates from the error correction model reveal that openness has reduced the expenditure of Central governments during the period of analysis, even when controlled for other factors affecting the government size. One of the reasons for the reduction in government size may be reduced revenue receipt from customs duty and excise taxes at the central level due to the sharp reduction in rates. During this period, there has been an increase in the share of direct tax in the total tax revenue of the central government. The analysis also revealed that the openness had reduced transfer from centre to States via reduction in size of central government. However, the impact of openness on transfer is far less than that on size of Central government.

Fifth chapter dealt with the issue of disparity in spending across states. The coefficient of variation of per capita public expenditure has increased sharply in recent years, indicating increase in inequality in expenditure across the states. The inequality in per capita development expenditure also showed a rising trend across the states over the years. This can be attributed to the increase in the disparity in revenue raising capacity across states reflected in increase in the coefficient of variations in per-capita own tax revenues. The increase in inequality in developmental expenditure means widening disparity in expenditure on education, health and rural development etc. Using Fixed Effects Model of pooled least squares, the study also showed that there is positive correlation between per capita own revenue and per capita GSDP indicating that those states which have higher per capita income are able to mobilise more revenue. The transfers system

has not been able to address these widening disparities in spending. Even the statutory transfers have shown positive association with GSDP but its regression coefficient is lower as compared to plan and discretionary transfers.

Having looked into the impact of globalization on size of central government, on transfer and thereby on expenditure of state government, it can be concluded that the transfer system should address the growing inequality in public expenditure, especially the inequality in developmental expenditure and own revenue collections, across the States while making devolution. There is a need to have a re-look at whether fiscal consolidation is at the cost of developmental expenditure of the states. There is also an urgent need to reduce the element of discretionary transfer from Centre to States.

BIBLIOGRAPHY

- Alesina, Alberto and Romain Wacziarg (1998), Openness, Country Size and Government, *Journal of Public Economics*, Vol.69, pp: 305-321.
- Alesina A and Roberto Perotti (1994), The welfare State and Competitiveness, NBER Working paper Series, Working Paper No. 4810, National Bureau of Economic Research.
- Alluwalla M S (2000), Economic Performance of State in Post reform period, *Economic Political Weekly*, May, pp: 1637-48.
- Anand M, Bagchi A, Tapas K Sen (2001), Fiscal Discipline at the State Level: Perverse Incentive and Paths to Reform; National Institute for Public Finance Policy, New Delhi.
- Bagchi Amaresh (1977), Fiscal Federalism: Problems and Possible Solution, *Indian Economic Review*, Vol: XII, No: 2.
- Bagchi Amaresh (1988), First Award of Ninth Finance Commission, *Economic and Political Weekly*, December 3, pp: 2593-2601.
- Bagchi Amaresh (2000), Rethinking Federalism: Overview of Current Debates with Some Reflections in Indian Context, *Economic and Political Weekly*, August 19, pp: 3025-3036.
- Bagchi Amaresh (2005), Symposium on Report Twelfth Finance Commission, Introduction and Overview, *Economic and Political Weekly*, July 30, pp: 3388-3395.
- Bagchi Amaresh and Chakraborty Pinaki (2004), Towards a Rational System of Centre-State Revenue Transfers, *Economic and Political Weekly*, June 26, pp: 2737-2747.
- Bagchi Amaresh (1996), Fiscal Management and Dimension, mimeo, National Institute of Public Finance and Policy, New Delhi
- Bharadwaj, Krishna (1982), Regional Differentiation in India, *Economic and Political Weekly*, April 17:14-16, pp: 605-14
- Bhattacharya, B B and Sakthivel S (2004), Regional Growth and Disparity in India, Comparison of Pre and Post Reform Decades, *Economic and Political Weekly*, Vol.39, No.10, pp: 1071-77.
- Bird M Richard and Michael Smart (2002), Central Governmental Fiscal Transfers: International Lessons for Developing Countries, *World Development*, Vol .30, pp: 889-912

- Breton A (1995), *Competitive Government: An Economic Theory of Politics and Public Finance*, Cambridge university Press, New York
- Breton A, (1965), A Theory of Government Grants, *Canadian Journal of Economics and Political Science*, Vol : 31, No. 2.
- Boadway Robin (1982), On Method of taxation and Provision of Local Public goods, Comment, *The American Economic Review*, Vol: 72, No. 4. pp: 846-851
- Boadway Robin and Flatters Frank (1982), Efficiency and Equalization Payment in a Federal System of Government: A Synthesis and Extension of Recent Results, *The Canadian Journal of Economy*, Vol: 15, no. 4.
- Brown S David and Hunter Wendy (1999), Democracy and Social Spending in Latin America, 1980-92., *The American Political Science Review*, December, Vol.93, No.4: pp: 779-790.
- Buchanan, J. and R. Wagner (1970), An efficiency basis for federal fiscal equalization , pp. 139-158 in J. Margolis (ed.) *The Analysis of Public Output*, NBER and Princeton University Press.
- Buchanan James (1950) Federalism and Fiscal Equity, *The American Economic Review*, Vol 40, No. 4, September, pp.583-599
- Buchanan James (1952), Federal Grants and Resources Allocation, *The Journal of Political Economy*, Vol: 60, No.3. pp. 534-536
- Buchanan James (1965), An Economic Theory of Clubs, *Economica*, vol. 32, No. 125, pp. 1-14
- Cameron R D (1978), The Expansion of Public Economy, A comparative Analysis, *The American Political Science Review*, Vol: 72, No.4. pp. 1243-1261
- Central Statistical Organization, *National Account Statistics*, various issues.
- Chakraborty, Pinaki (1998), Growing Imbalance in Federal Fiscal Relationship, *Economic and Political Weekly*, February 14, pp: 350-354.
- Chakraborty Pinaki (2003), Unequal Fiscal Capacity across India's States: How Corrective is the Fiscal Transfer Mechanism, Paper prepared for the *UNU/WIDER Project Conference on Spatial Inequality in Asia*. United Nations University Centre, Tokyo, 28-29 March 2003

- Chakraborty, Pinaki (2005), Debt Swap in Low Interest Rate Regime: Unequal Gains and Future Worries, *Economic and Political Weekly*, Vol XL, October 1, 2005, No. 40. pp.4357-4362
- Chakraborty Pinaki (2008): "Budget Rules, Fiscal Consolidation and Government Spending: Implications for Federal Transfers", paper presented in a Symposium on Issues Before Thirteenth Finance Commission, National Institute of Public Finance and Policy, New Delhi
- Chanda Ashok (1965), *Federalism in India*, George Allen and Unwin Ltd London.
- Chelliah Raja (1981), *Trends and Issues in Indian Federal Finance*, Allied Publishers Private Ltd, Delhi.
- Chelliah J Raja (2005), Malady of Continuing Fiscal Imbalance, *Economic and Political Weekly*, July 30: pp: 3399-3404.
- Cusack T R (1997), *Partisan Politics and Public Finance, Change in Public Spending in Industrialized Democracies 1955-1989*, Public Choice, Vol :91
- Dadibhavi R V, Bagalkoti S T and Joshi Sahana (2006), Inter-state Growth Inequalities in India: Pre- and Post- Reform Period, *Journal of Social and Economic Development*, July-December pp: 207-221.
- Dandekar V M (1987), Unitary Element in Federal Constitution, *Economic and Political Weekly*, October 31, pp: 1865-1870
- Dandekar V M and Rath N (1971), Poverty in India, *Economic and Political Weekly*, January, Vol. 35, 3, pp:155-56
- Dandekar V M (1981), On Measurement of Poverty, *Economic and Political Weekly*, Vol. XVI. No.30 July 25, pp 1241-1250.
- Datta Bhabatosh (1979), An Evaluation of the Seventh Award, *Economic and Political Weekly*, January 13.
- Dholakia Archana (2005), Measuring Performance of States: An Alternative Approach, *Economic and Political Weekly*, July 30: pp: 3421-3428.
- Dreher Axel, Sturm Jan-Egbert and Ursprung W. Heinrich (2006), The Impact of Globalisation on the Composition of Government Expenditures: Evidence from Panel Data, *CESIFO Working Economy*, Vol. 15, No. 4.
- Engle E Robert and Granger C W J (1987), Co-integration and Error Correction: Representation, Estimation and Testing, *Econometrica*, March, Vol.55, pp: 257-276.

- Ethisham Ahamad and Jon Craig (1997), Inter governmental transfers, Fiscal Federalism theory and Practice, Edited by Teresa Ter-Minassian, International Monetary Fund.
- Fraschini A (2006), Fiscal Federalism in Big Developing Countries: China and India; Working Paper: 66, University of Eastern Piedmont, Italy
- Garand J (1988), Explaining Government Growth in U S States, *The American Political Science Review*, Vol: 82, No. 3 pp: 837-49
- Garg Subash Chandra (2006), Transformation of Central Grants to Sates, Growing Conditionality and Bypassing State Budget, *Economic and Political Weekly*, December 2. Vol. 41 (8).
- Garret G (1998), Shirking States, Globalization and National Autonomy in OECD, *Oxford Development Studies* 26 (1), pp: 71-98
- Garrett G (1995), Capital Mobility Trade and Domestic Politics of Economic Policy, *International Organization*, Vol: 49. pp: 657-87.
- Garrett G (1998), Governing the Global Economy: Economic Policy and Market Integration Around the World mimeo (Yale University)
- Garrett G and Mitchell D (1999), Liberalization and Welfare State, mimeo, Yale University, July 1999.
- George K K (1986), Discretionary Budget Transfers: A Review, *Economic and Political Weekly*, and November 15. Pp: 1993-1998.
- George K K (1988), Centre-State Financial Flows and Inter-State Disparities, Criterion Publications, Delhi.
- George K K (2002), Major Issues in State Level Reforms, IEA 85th Conference Volume.
- George K K (1986), Discretionary Budgetary Transfers: A Review, *Economic and Political Weekly*, November 15.
- Ghosh Jayati (2005), Twelfth Finance Commission and Restructuring of State Government Debt: A Note, *Economic and Political Weekly*, July 30: pp: 3435-3439.
- GOI (1968), Report of the Study Team on Central-State Relationships, Vol.1, New Delhi.
- GOI (2004, 2005, 2006, 2007), Economic Survey
- GOI, Report of (Twelfth) Finance Commission (2005)
- GOI, Report of (Eleventh) Finance Commission (2000)

- GOI, Report of (Tenth) Finance Commission (1994)
- GOI, Report of (Ninth) Finance Commission (1989),
- GOI, Report of (Eight) Finance Commission (1984)
- GOI, Report of (Seventh) Finance Commission (1978)
- GOI, Report of (Sixth) Finance Commission (1973)
- GOI, Report of (Fifth) Finance Commission (1969)
- GOI, Report of (Fourth) Finance Commission (1965)
- GOI, Report of (Third) Finance Commission (1961)
- GOI, Report of (second) Finance Commission (1957)
- GOI, Report of (First) Finance Commission (1952)
- GOI, Budget Document, Various Issues.
- GOI, Economic Survey, Various Issues
- Gramlich M Edward (1982), *An Econometric Examination of New Federalism, and Brooking Papers on Economic Activity*, Vol: 1, no. 2. pp. 327-70
- Grewal B S (1975), *Centre-State Financial Relations in India*, Punjab University Press, Patiala.
- Grunberg Isabelle (1998), *Liberalization and Fiscal Squeeze*, *World Development*, Vol: 26, No.4, pp: 591-605.
- Gulati and George (1978), *Inter-State Redistribution through the Budget*, *Economic and Political Weekly*, Vol.III, No.11
- Gulati I S (1987), *Approach of the Finance Commission, Central State Budgetary Transfers*, ed. Gulati , Oxford University Press.
- Gulati I S (1988), *The Indian Federal Fiscal Model*, *Social Scientist*, February, Vol.16, No.2: pp: 41-49.
- Gulati I S and George K K (1978), *Inter State Redistribution through the Budget*, *Economic and Political Weekly*, Vol. 13, no.11. pp:523-28
- Gulati IS and George K K (1985), *Central Inroads into State Subjects*, *Economic and Political Weekly*, April 6.

- Hackett D W and Kabir M (1989), Is Atlantic Canada becoming more Dependent on Federal Transfers?, *Canadian Public Policy/ Analyse de Politiques*, March, Vol.15, No.1: pp: 43-48.
- Heller Peter S and Diamond Jack (1990), International Comparison of Government Expenditure Revisited: The Developing Countries, Occasional Paper, April, no.69, Washington, International Monetary Fund.
- Hicks A and Swank D (1992), Politics, Institutions, and Welfare Spending in Industrialized Democracy 1960-82, *American Political Science Review*, vol.86, pp: 658-74.
- Inman P Robert and Rubinfeld Daniel (1997), Rethinking Federalism, *The Journal of Economic Perspectives*, Vol : 11, no. 4, PP 43-64
- Isaac Thomas T M and Ramkumar R (2006), Why Do State Not Spend: An Exploration of the Phenomenon of Cash Surpluses and the FRBM Legislation, *Economic and Political Weekly*, December 2, pp: 4965-4976.
- Kane J Edward (1962), The Interregional Flow of Funds in the United States, 1955-58, *The Journal of Finance*, December, Vol.17, No.4, pp: 681-682.
- Kar Sabyasachi and Sakthivel (2007), Reform and Regional Inequality in India, *Economic and political weekly*, pp: 67-77
- Keen Michael, Marchand Maurice (1997), Fiscal Competition and Pattern of Public spending, *Journal of Public Economics*, October, pp: 33-53.
- Kumar Dharma (1982), The Fiscal System in the Cambridge Economic History of India, Edited by Dharma Kumar, Orient Longman, Delhi, vol.2
- Kurian N J (2005), Debt Relief for States, *Economic and Political Weekly*, July 30: pp: 3429-3434.
- Kurzer P (1993), Business and Banking: Political Change and Economic Integration in Western Europe, Cornell University Press, Ithaca.
- Lakdawala D T (1967), Union State Financial Relations, Lalvani Publishing House, Bombay.
- Luzir De Mello Jr (2000), Fiscal Decentralization and Intergovernmental Fiscal Relation: A Cross Country Analysis, *World Development*, Vol 28, No:2, pp365-380
- Maxwell A James (1974), Federal Grants in Canada, *Publius*, Vol. 4, No.2: pp: 63-75.

- Meltzer H A and Richard and Scott F (1981), A Rational Theory of Size of Government, *The Journal of Political Economy*, Vol: 89, no. 5
- Mitra Ashok, (1987), "Will Growth and Centralized Fiscal arrangement Do?" in Gulati I S (Ed) *Central State Budgetary Transfers*, Oxford University Press.
- Mukherji Rahul (2004), Privatisation, Federalism and Governance, *Economic and Political Weekly*, January 3, pp: 109-113.
- Musgrave A Richard (1997), Reconsidering the Fiscal Role of a Government, *The American Economic Review*, vol 87, No. 2. pp: 156-59
- Musgrave A Richard (1997), Devolution Grants and Fiscal competition, *Journal of Economic Perspective*, vol 11, No .4. pp.65-72.
- Nagaraj, R., Varoudakis A. and M. Veganzones (1998), Long Run Growth Trends and Convergence Across Indian States, Technical Paper 131, OECD Development Centre, Paris, France.
- Nanjundappa D M (1974), *Intergovernmental Financial Relations in India*, Sterling Publications, New Delhi.
- Nanjundappa, M and Rao, GVK (1973), Re-examining the Basis of Plan Assistance, *Economic and Political Weekly*, September 15.
- Nayak B Pulin (1999), Federal Fiscal Relation: An overview, *Federal India Emerging Economic Crisis*, ed. by V S Jafa, Indian Tax Institute, Delhi.
- Nayyar Gourav (2008), Economic Growth and Regional Inequality in India, *Economic and Political Weekly*, February 9, pp: 58-63.
- Newbold P and Granger C W J (1974), Experience with Forecasting Univariate Time Series and the Combination of Forecast, *Journal of Royal Statistical Society*, Vol : 137, No.2, pp: 131-165.
- Oates Wallace E (1968), The Theory of Public Finance in a Federal System, *The Canadian Journal of Economics*, Vol 1, no 1, pp: 37-54
- Oates Wallace E (1972), *Fiscal Federalism*, The Harbrace Series in Business and Economics, Harcourt Brace Jovanovich.Inc,
- Oates Wallace E (1999), An Essay on Fiscal Federalism, *Journal of Economic Literature*, Vol : 37, No 3, pp: 1120-1149

- Oates Wallace E (1969), The Effect of Property Tax and Local Public Spending in Property values: An Empirical study of Tax Capitalization and Tiebout Hypothesis, *Journal of Political Economy*, Vol.77.
- Oates Wallace E (1977), *Political Economy of Fiscal Federalism*, Lexington Books.
- Quinn (1997), The Correlates of Change in International Financial Relation, *American Political Science Review*, Vol: 91, pp: 531-51.
- Quyum A (1967), The Finance Commission and The State, In *Union and State Relation in India*, ed. By S.A.H Haqqi, Meenakshi Prakashan, Meerut.
- Rajaraman Indira (2004), Fiscal Restructuring in the Context of Trade Reform, Working Paper no. 7, National Institute of Public Finance and Policy.
- Rajaraman Indira and Majumdar Debdatta (2005), Equity and Consistency Properties of TFC Recommendations, *Economic and Political Weekly*, July 30: pp: 3413-3420.
- Rakshit Mihir (2005), Some Analytics and Empirics of Fiscal Restructuring in India, *Economic and Political Weekly*, July 30, pp: 3440-3448.
- Ram R (2005), Openness and Government Size, Additional Evidence from Multi Country Data, *Public Finance*, Vol 54, pp: 21-36
- Ram Rati (1987), Wagner's Hypothesis in Time series and Cross section Perspectives: Evidence from Real Data for 115 Countries, *Review of Economics and Statistics*, May, No.69, pp: 194-204.
- Ramaswamy K V (2007), Regional Dimension of Growth and Employment, *Economic and Political Weekly*, December 8, pp: 47-56.
- Rangarajan C (2005), Twelfth Finance Commission: Approach and Recommendations, *Economic and Political Weekly*, July 30, pp: 3396-3398.
- Rao, VKRV (1973), Scope for Rationalism within the System, *Economic and Political Weekly*, November 3.
- Rao Hemalata (1981), *Central-State Financial Relations, Criteria of Federal Fiscal Transfers and their application in India*, Allied Publishers Private Ltd, New Delhi
- Rao Govinda M and Singh Nirvikar (2005), *Political Economy of Federalism in India*, Oxford University Press, New Delhi
- Rao Govinda M (1981), *Political Economy of Tax and Expenditure Determination*, Allied Publishers Private Ltd.

- Rao Govinda M (1987), Fiscal Imbalance in India Federalism, Trends and Issues, NIPFP Working Paper no: 30
- Rao Govinda M and Chelliah Raja (1991), Survey of Research on Fiscal Federalism in India, Monograph Series -II, National Institute of Public Finance and Policy.
- Rao Govinda M (2000), Tax Reform in India: Achievement and Challenges, *Asia-Specific Development Journal*, Vol.7, No.2, pp: 59-74.
- Rao Govinda M (2004), Linking Central Transfers to Fiscal Performance of States, *Economic and Political Weekly*, May 1: pp: 1820-1825.
- Rao Govinda M (2005) Changing Counters in Indian Fiscal Federal Arrangement in India, Readings in Public Finance, ed. Bagchi A, Oxford University Press.
- Rao Govinda M and Jena R Pratap (2005), Balancing Stability, Equity and Efficiency, *Economic and Political Weekly*, July 30, pp: 3405-3412.
- Rao Govinda M and Singh Nirvikar (2005), Political Economy of federalism in India, Oxford University Press.
- Rao Govinda M and Singh Nirvikar (2002), Political Economy of Centre-State Fiscal Transfers in India, ed. John McLaren, Institutional Assignment of Tax Design and Reform, World Bank, Washington DC , pp : 69-123.
- Rao Govinda M and Tapas K Sen (1995), Fiscal Federalism in India, Theory and Practice, National Institute for Public Finance and Policy.
- Rao Govinda M and Sen Kunal (1997), Internal Migration, Center-State Grants, and Economic Growth in the States of India, Staff Papers-International Monetary Fund, June, Vol.44,
- Rao Govinda M, Shand R T and Kalirajan K P (1999), Convergence of Income Convergence of Income Across states, *Economic and Political Weekly*, March
- RBI, Handbook of Statistics on Indian Economy, various issues
- RBI, Handbook of Statistics on State Finance, various issues
- RBI, RBI Bulletin, various issues
- Reeves Clyde H (1968), Role of State Governments in Our Intergovernmental System, *Public Administration Review*, May-June, Vol.28, No.3, pp: 267-270.
- Reisen H, (1990), Interaction between exchange rate and public debt in major debtor developing countries, In Fiscal Policy In Open Developing Economies, ed. Vito Tanzi, IMF, Washington.

- Rodrik Dani (1996), Understanding Economic Policy Reform, *Journal of Economic Literature*, March, Vol: 34, no.1, pp: 9-41.
- Rodrik Dani (1997), Sense and Nonsense in the Liberalization Debates, Understanding Economic Policy Reform, *Journal of Economic Literature*, Vol 34, No .1
- Rodrik Dani (1998), Why Do Open Economy Have Bigger Governments, *Journal of Political Economy*, Vol: 106, no .5.
- Rodrik Dani (2000), How Far Economic Integration Will Go, *Journal of Economic Perspectives*, Vol: 14, no .1.
- Rudra N (2002), Liberalization and he Decline of Welfare State in Less Developed Countries, *International Organization*, Vol: 56, No. 2.
- Ruggeri G C, Wart Van D, Robertson G K and Howard R (1981), Vertical Fiscal Imbalance and the Reallocation of Tax Fields in Canada, *Canadian Public Policy/Analyse de Politiques*, Vol.19, No.2, pp: 194-215.
- Sameti Morteza (2004), Globalization and Size of Government Economic Activities, mimeo, Isfahan University
- Sarma, Atul, and Kayani M R S (1988), Normative Approach Genesis and Applicability, Paper Presented at the Seminar on Issues before in the Finance Commission, National Institute of Public Finance and Policy
- Sastry, K V S (1966), *Federal-State Financial Relation in India*. Oxford University Press.
- Schroeder L, Smoke P; "Intergovernmental Fiscal Transfers: Concepts, International Practice and Policy Issues", Syracuse university and New York University.
- Schulze G Gunther and Ursprung W Heinrich (1999), Liberalization of the Economy and the Nation State, *The World Economy*, Vol: 22, May, pp: 295-351.
- Scott A D (1952), Federal grants and resources allocation, *The journal of Political Economy*, Vol : 60, no. 6.
- Shetty S L (2003), Growth of SDP and Structural Changes in State Economics, Interstate Comparison, *Economic and Political Weekly*, March,
- Singh N (2007), The Dynamics of Reform of India's Federal System, University of California, Santa Cruz, March, MPRA paper No. 2282.
- Singh N and Vasishtha G (2004), Pattern of Centre -State Fiscal Transfers, An Illustrative Analysis, *Economic and Political Weekly*, November 6, pp: 4897-4903

- Singh Nirvikar (2006), *State Finance in India, A Case of Systematic Reform*, University of California, Santa Cruz, March, MPRA, Paper No.1281.
- Singh Nirvikar (2007), *The Dynamics of Reforms of India's Federal System*, University of California Working Paper.
- Singh Nirvikar and Bhandari L (2003), *Regional Inequality in India Addendum*, *Economic and Political Weekly*, July 26, pp: 3213.
- Singh Nirvikar and Srinivasan T N (2002), *Indian Federalism Economic Reform and Globalisation*, UC Santa Cruz Centre for International Economics Working Paper No.02-13, May 20.
- Sinha Aseema (2004), *The Changing Political Economy of Federalism in India, A Historical Institutionalist approach*, *India Review*, vol.37, No.2, April.
- Srinivasan T N (2004), *China and India: Economic Performance Competition and Cooperation, An Update*, Yale University, New Haven USA
- Srinivasan T N and Wallack Jessica (2003), *Federalism and Economic Reform in a Global Economy (Preliminary Draft)*, Yale University and Graduate School of Business, Stanford.
- Srivastava D K (2006) *FRBM Act and Eleventh Plan Approach Paper*, *Economic and Political Weekly*, 4-10, November.
- Swank D (1997), *Global Markets, Democratic Institutions, and the Public Economy in Advanced Industrial Societies*, mimeo, Marquette University.
- Tait Alan A and Heller, Peter S (1982), *International Comparison of Government Expenditure Occasional Paper No: 10*, April, Washington International Monetary Fund.
- Tanzi V (2000), *Globalisation and the Future of Social Protection*, IMF Working Paper 00/12, Washington DC.
- Tiebout M Charles (1956), *A Theory of Local Expenditure*, *The Journal of Political Economy*, vol : 64, No. 5.
- Venkataraman K (1968), *States' Finance in India*, George Allen and Unwin Ltd., London.
- Viswanathan , Renuka (1990), *Enforcing Fiscal Discipline*, *Economic and Political Weekly*, June 9.
- Yingyi Quan and Weingast R Barry (1997), *Federalism as a commitment to Preserving market Incentives*, *Journal of Economic Perspective*, vol1: 11, November 4, pp 83-92.

Appendix

Figure1: Size of Central, State, Combined (Central Plus State) Government and Transfers

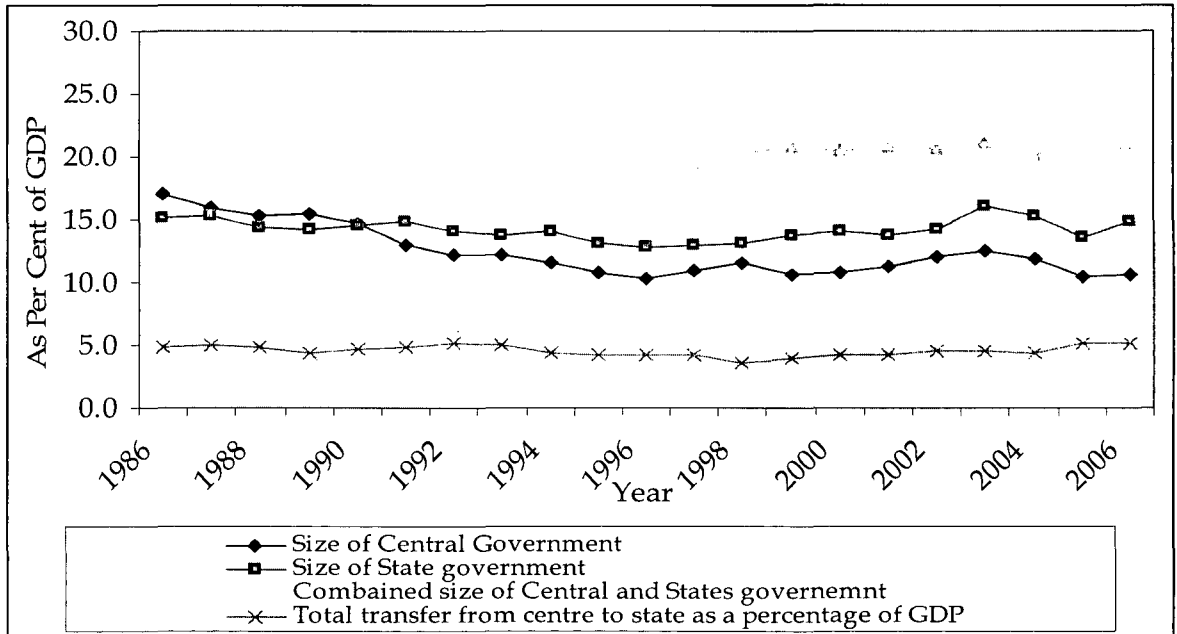


Table 1: Coefficient of Variation of Per Capita Expenditure, GSDP and Own Revenue across the States over the years

| Year | Coefficient of variation of Per capita Expenditure | Coefficient of Variation of Per capita GSDP | Coefficient of Variation of Per capita own revenue |
|---------|--|---|--|
| 1980-81 | 23.0 | 31.3 | 45.6 |
| 1981-82 | 22.1 | 32.5 | 44.9 |
| 1982-83 | 29.1 | 32.0 | 46.7 |
| 1983-84 | 24.8 | 30.0 | 45.7 |
| 1984-85 | 24.6 | 31.1 | 44.3 |
| 1985-86 | 25.2 | 32.0 | 43.8 |
| 1986-87 | 24.9 | 31.3 | 45.0 |
| 1987-88 | 23.6 | 32.3 | 43.0 |
| 1988-89 | 24.7 | 32.1 | 41.2 |
| 1989-90 | 23.8 | 34.3 | 42.8 |
| 1990-91 | 21.1 | 33.5 | 42.7 |
| 1991-92 | 38.4 | 34.0 | 55.4 |
| 1992-93 | 25.4 | 36.3 | 41.0 |
| 1993-94 | 25.4 | 34.5 | 43.5 |
| 1994-95 | 30.2 | 34.4 | 46.9 |
| 1995-96 | 29.0 | 35.0 | 47.1 |
| 1996-97 | 28.7 | 35.8 | 47.9 |
| 1997-98 | 32.9 | 34.2 | 47.7 |
| 1998-99 | 34.6 | 33.8 | 46.3 |
| 1999-00 | 30.2 | 34.4 | 46.5 |
| 2000-01 | 35.2 | 38.0 | 45.7 |
| 2001-02 | 35.8 | 38.4 | 49.0 |
| 2002-03 | 31.9 | 39.6 | 47.9 |
| 2003-04 | 27.4 | 38.8 | 48.2 |
| 2004-05 | 32.7 | 39.5 | 46.8 |

Source: Handbook of Statistics on Indian Economy, RBI and National Account Statistics, CSO

Table 2: Coefficient of Variation of Per Capita and Grants From Centre to States Over the years

| Year | Coefficient of Variation of Per Capita Tax Devolution | Coefficient Variation of Per capita Grants Devolution |
|---------|---|---|
| 1980-81 | 7.6 | 43.5 |
| 1981-82 | 8.4 | 35.0 |
| 1982-83 | 9.1 | 60.6 |
| 1983-84 | 11.5 | 28.0 |
| 1984-85 | 11.2 | 16.5 |
| 1985-86 | 18.4 | 26.6 |
| 1986-87 | 28.0 | 30.6 |
| 1987-88 | 18.3 | 33.8 |
| 1988-89 | 18.9 | 28.0 |
| 1989-90 | 19.8 | 32.1 |
| 1990-91 | 19.6 | 29.6 |
| 1991-92 | 18.6 | 28.6 |
| 1992-93 | 18.6 | 26.1 |
| 1993-94 | 17.8 | 21.5 |
| 1994-95 | 18.5 | 33.0 |
| 1995-96 | 21.3 | 29.6 |
| 1996-97 | 21.1 | 24.8 |
| 1997-98 | 21.3 | 33.3 |
| 1998-99 | 17.9 | 23.2 |
| 1999-00 | 19.8 | 35.1 |
| 2000-01 | 35.8 | 36.1 |
| 2001-02 | 34.8 | 31.6 |
| 2002-03 | 33.7 | 41.0 |
| 2003-04 | 33.6 | 36.6 |
| 2004-05 | 35.6 | 30.5 |
| 2005-06 | 29.3 | 28.8 |
| 2006-07 | 31.0 | 25.6 |
| 2007-08 | 30.9 | 28.5 |

Source: Handbook of Statistics on Indian Economy, RBI and National Account Statistics, CSO

