# Decentralization in India: Outcomes and Opportunities

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## Abstract

Though the literature on federalism explains the economic gains from decentralised decision making and related issues in India, there are very few empirical studies examining the causal relationship between decentralisation and development outcomes. Much of the demonstrated gains are in the nature of assertions or qualitative statements. This study, attempts to analyse and quantify the impact of decentralisation in India on its social infrastructure that needs to be supplied by governments as they are not optimally provided by the private sector and on rural development where about 70% of the population live.


Key Words: Fiscal Decentralization, rural development, social infrastructure, India

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## Introduction

One of the central questions in Development Economics is why some countries have remained poor for a long period of time, though the general policy approaches to combat poverty are well understood. A corollary to the above question is why the similar package of policies differs in efficacy across countries. Similarly, an identical set of policies differs in effectiveness across provinces or States within a country.[1] Drawing on the Post-Washington Consensus, it may be argued that the inability to achieve similar results from policy packages across States is due to the constraints posed by country-specific organisational or institutional factors. One of the major institutional factors directly involved in the delivery of public services and in implementing development policies is the degree of decentralisation. Therefore, a key to enhancing the efficacy of policies lies in a better understanding of the extent and process through which various forms of decentralisation contribute to development.

What do we understand by decentralisation? Decentralisation can best be understood as a political process in the sense of the devolution of resources, tasks and decision-making power to democratically elected lower-level authorities, which are largely or wholly independent of central government (World Bank, 2000). It is rational to argue that decentralisation facilitates time-specific and location-specific knowledge to implement policies that influence people's welfare. Decentralisation in political, fiscal, and economic systems affects development outcomes in a number of ways. First, decentralised provision of social and physical infrastructures should correspond with the diverse demand conditions in different regions and match their resource endowments better than central provision. Even with regard to the provision of quasi-public goods, identification of target groups of beneficiaries is easier and implementation of policies more effective when undertaken by decentralised governmental units (Ostrom et al., 1993). Thus, even when there is some controversy over the redistributive role of sub-central governments, their desirability in implementing poverty alleviation policies is generally agreed upon (Brown and Oates, 1987; Ladd and Doolittle, 1982; Pauly, 1973).

[1] A comprehensive study that has analysed the different responses of the States to the reforms initiated by the Central Government of India is by Howes, Lahiri and Stern (2003).

Second, competition among sub-central jurisdictions may promote innovations and enhance productivity. At the same time, as the decentralised governmental units function within a large nation-wide unified market free from impediments to the movement of factors and products, it can provide a congenial environment for the efficient functioning of the market economy. Thus, drawing on the decentralisation theorem introduced by Oates (1972), in an ideal decentralised system, existing resources will be allocated to yield the maximum possible output (locating on the production possibility frontiers) and the competitive environment including inter-governmental competition will be conducive for technological progress(shift in the frontier). In reality, the possibility of decentralisation failing to overcome regional and local dimensions of poverty and inequality (Prudhomme, 1995 and Rodden, 2002) may not be ruled out, mainly because the decision making power on local developmental initiatives is often highly dependent on state bureaucracy. Further, decentralisation may increase the probability of empowering local elites in capturing larger share of public resources at the cost of the poor (Dreze, J. and Sen, 1996).

With the recent developments in the political arena where coalition government at the center, and different regional parties who are mostly the partners of the coalition at the center, the case study of Indian experience of decentralisation provides an important context of understanding the ways in which decentralisation can influence overall socio-economic welfare. The Government of India passed a series of constitutional reforms in 1993 to democratise and empower local administrative institutions beyond the two tiers of the Centre and the States in the third tier of local governance that has been divided into three layers of district, sub-district and village levels in terms of the 73rd Constitutional amendment. Since then, the experiences of different States with respect to decentralisation vary a lot. Though the literature on federalism explains the economic gains from decentralised decision making and related issues (Rao and Singh, 2003; Rao and Singh, 2006), there are very few empirical studies examining the causal relationship between decentralisation and development outcomes. Much of the demonstrated gains are in the nature of assertions or qualitative statements. This study, attempts to analyse and quantify the impact of decentralisation in India on its social infrastructure that needs to be supplied by governments as they are not optimally provided by the private sector and on rural development where about 70% of the population live.

The following section discusses some important issues concerning fiscal decentralisation in India. The next section examines the measures of spatial disparity in social infrastructure development across States. The following section analyses the impact of decentralisation on social infrastructure and on rural development. A final section brings out the overall conclusions of this study.

**Fiscal Decentralisation in India - Major Issues[2]**

The degree of decentralisation or local autonomy depends on the Constitutional assignment and practices and conventions developed over the years. The basic framework of inter-governmental relationships in Indian federation is given by the Constitutional assignment of functions and sources of finance. The seventh schedule to the Constitution of India specifies the Union list - the exclusive domain of the Central government, the State list- the exclusive domain of the State governments, and the Concurrent list where both levels have joint jurisdiction.

An important feature of the Constitutional assignments in India is the centripetal bias in the assignment of powers. First, almost all broad based taxes, with the sole exception of the sales tax, are assigned to the Central government. Second, effectively, States do not have independent borrowing powers. When a State is indebted to the Centre, it must seek the Centre's permission to borrow. As all the States are indebted to the Centre, their market borrowing is determined by the Union Ministry of Finance in consultation with the Planning Commission and the Reserve Bank of India. Also the States cannot incur overdrafts with the Reserve Bank of India for more than ten continuous working days. The Constitution not only assigns overwhelming powers to the Central government, but also has overriding powers in the event of a conflict in a concurrent jurisdiction.

The centripetal bias is not merely the consequence of Constitutional assignment. The adoption of planned development strategy and allocation of resources according to priorities determined by the planning agency have also contributed immensely to the centralisation of economic power. Although planning was originally to be implemented in a decentralised

[2] Fiscal decentralisation or autonomy of a State is given by the extent to which it is able to finance its public expenditure from the revenue sources assigned to it. Thus, one measure of decentralisation will be the share of a State's own revenue in its expenditures. However, as the statutory transfers are mandated in the Constitution and given on the basis of recommendation by the Finance Commission, an independent Constitutional body, the revenue from shared taxes and statutory grants can be considered on par with that of the States' own revenues. Therefore, an alternative measure is given by the share of State revenue including statutory transfers to denote fiscal decentralisation.

manner, the involvement of sub-central governments in resource allocation has in practice been limited. Comprehensive central planning is the negation of federalism; and planning even in a mixed economy framework has significantly contributed to the concentration of economic power with the Centre. In the event, the potential benefits of decentralisation have not been realised.

Achieving the potential benefits of decentralisation in the Indian federation has been further obstructed by the various fiscal and regulatory impediments to the movement of factors and products across the country. Some of these impediments were created for the economic management of supply shortage of essential commodities. The fiscal impediments were the consequence of the free-riding behaviour of the States, particularly the attempt to export the tax burden to non residents. These impediments, along with high levels of protection, distorted relative prices and created a high cost economy.

Another reason for centralisation has been the failure to specify the powers and functions of governmental units below the State level, until the 73rd Constitutional amendment was given effect very recently. The State governments, following the Balwantrai committee report, adopted the local self government unit in rural areas (Panchayati Raj), right from the village level. However over the years, in many of the States these institutions became inactive with elected councils being superseded for indefinite periods. In some States, notably in Andhra Pradesh, Karnataka and West Bengal there was an attempt at rejuvenating these local self governments at the village level by activating them politically, making greater devolution of powers and finances to them and in some cases, consolidating them into more viable economic and administrative units. However, frequent changes in the ruling party in Karnataka and Andhra Pradesh rendered these experiments abortive though in West Bengal it has continued. With the 1993 Constitutional amendment, however, it is mandatory to have a uniform system of Panchayati Raj throughout the country and the eleventh schedule specifies a list of 29 items to be carried out by the local bodies in rural areas concurrently with the State governments. The amendment also provides for regular elections to these Panchayats and objective methods of devolution of resources by appointing State Finance Commissions. At present, these amendments are being implemented gradually in many States.

The above discussion brings out two important features. First, the potential economic benefits of decentralisation in the Indian federation could not be achieved due to the centripetal bias in the constitution and the centralisation of economic powers due to planning and other developments. Of course, it is extremely difficult to quantify the loss of potential output or welfare due to the absence of the desired degree of decentralisation. Second, there has been a significant inter-State variation in the degree of decentralisation and other institutional situations. This has impacted differently on States. Therefore, the analysis of different States should lead to a better understanding of the economic dynamics of decentralisation.

Another important feature of the Indian fiscal federalism is the existence of severe vertical and horizontal imbalances (Rao, 2009). States have been assigned expenditure responsibilities far in excess of their revenue resources. In particular, the Constitution assigns predominant responsibility of building social and physical infrastructure for rural development to the states. Also, being closer to the people, the States have to cater to the needs of the poor much more responsively than the Central government. Furthermore, the capacity to raise revenues varies widely among the States. Variation in per capita incomes even among the 14 general category States is almost 1:4. General purpose transfers are required to offset these vertical and horizontal imbalances. Additionally, for services with a high degree of inter-state spillovers or those in the nature of merit goods, specific purpose transfers are necessary to ensure availability of certain minimum levels. To ensure this, specific purpose transfers, preferably with matching requirements are necessary.

In India, both general purpose and specific transfers are given, but their design and implementation leave much to be desired. The Finance Commission, a statutory body, and the Planning Commission give general purpose transfers, but neither has been able to design the transfers to offset fiscal disadvantages of the States with low revenue capacity and high unit cost of providing public services (Rao, Shand, and Kalirajan, 1998). In fact, the two agencies sometimes have worked at cross purposes. The bulk of the transfers given by both agencies is on the basis of general economic indicators and is not targeted to offset fiscal disadvantages of the States with low revenue capacity and high unit cost of public services. The practice of filling projected budgetary gaps by the Finance Commissions has created disincentives for prudent fiscal management. Thus, the general purpose transfers have not served the objectives of either equity or efficiency to the desired extent.

There are a number of problems in the design of specific purpose transfers given for poverty alleviation. The proliferation of specific purpose transfers for a variety of purposes has constrained the availability of resources for spending on poverty alleviation and has spread the resources thinly across several programs. The volume of resources available for transfer to poverty alleviation is inadequate to make any impression on the poverty problem. Nor is the design of the transfer system targeted to alleviate poverty. (For details see, Rao and Das-Gupta, 1995) Thus, the design and implementation of inter-governmental transfer systems in India leave much to be desired. This is another factor creating the divergence between the potential and actual rural development outcomes and there are inter-state differences in these divergences. Further, inter-governmental transfers create different degrees of fiscal autonomy to different States and these influence development outcomes differently.

**Is there spatial disparity in social infrastructure development?**

As the major objective of decentralisation is to provide easy access to local public goods that improve social infrastructure, we first examine the status of some of the indicators of social infrastructure across States. An effective functioning of decentralisation across States is expected not to widen spatial disparity in social infrastructure development. We adopt the measure of weighted coefficient of variation to examine the trends in spatial balance in the basic social development indicators: Infant mortality rate (IMR), Life expectancy at birth (LE), Literacy rate (LR), Telecom density per thousand population (TD), and per capita Electricity consumption (EC) in kwh, and the results are given in Tables 1 and 2. The trends clearly show that there is a reduction in disparity in literacy rate, and life expectancy at birth. In the case of infant mortality rate, the trends are less clear (Table 1). The trends in infrastructure development, which include telephone density and per capita electricity consumption, also show a general improvement, particularly in very recent times (see Table 2).

Thus, there has been an improvement in recent times in four out of the five development indicators considered, and the progress appears to be more spatially balanced than before recognizing the importance of decentralisation. The movement towards more equitable levels of performance amidst rising development indicates that there are factors facilitating spatially equitable social infrastructure development. Which are the factors contributing to such equality? Is decentralisation a significant contributing factor? Answers to these questions are attempted in the following pages.

**Factors facilitating spatially equitable development**

The Central government intends to ensure equal access to basic services such as primary education, primary health care, infrastructure such as roads, drinking water, electricity and communication services across States. However, Table 3 shows that States could finance their current expenditures or revenue expenditures by their own revenues only by about 56 percent. Therefore, the Centre shares some of its revenues from sources such as income tax with States. The norms for allocation of resources from the Centre to States are mostly 'formula' based, which depends on factors such as population without any distinction of scheduled tribe (ST) and non-ST population.[3] There are two main institutions that are constitutionally created for every five years by the President of India to transfer resources from the Centre to States and they are the Finance Commission and Planning Commission. Both institutions first fix the amount of tax revenues that needs to be transferred from the Centre to States, which is called 'vertical transfer', and then distributes the allocated amount to States, which is called 'horizontal transfer' using different formulas. The Planning Commission also does specific purpose transfers for various central schemes implemented by different ministries of the Central government without using any formula, which is called 'non-statutory' transfers (Rao and Chelliah, 1995). Table 4 shows the vertical transfer from the Centre to States over the years, which indicates the overall transfer of about 38% of Centre's revenues to States. The formula used for horizontal transfer by the XII Finance Commission covering the period 2005-2010 is given in Table 5.6 along with the Planning Commission's Gadgil formula used in the X Plan (2002–2007).[4] The Gadgil formula that is binding the Planning Commission need not have any sanctity for the Finance Commission (Rao, 1995).

How has the instrument of decentralisation worked in achieving spatial equitable distribution in social infrastructure development in the Indian context? We examine this dimension of the process in the rest of this study.

**Disparities in state government expenditures**

What has been the pattern of expenditures across States since the beginning of a policy regime which has been more reliant on markets to deliver growth than in the past? We have used revenue (or broadly, current expenditures) of the State governments for analysis as they

[3] Jha (2007) has provided a concise discussion on the issues concerning the principal constituents of the resources transfer formula between the first and second layers of governments in developing countries. He has argued that the relative weights on these constituents will often be determined by country-specific circumstances.

[4] In the Indian case, decentralization has come about more from the Center than the States. Many States did not find the need to decentralize below their administrative level until the Constitution was amended in 1993. Decentralization was initiated to provide easy access to public goods locally. There were 247,033 rural bodies known as Panchayats and 3,682 Urban bodies in 2005. Nevertheless, Constitution grants strong powers to the Central government, including the control of the central executive over state legislation, and the right to take over state administration in a state of emergency (Rao, 2005).

make up about 77 per cent of total expenditures today. Within revenue expenditures, ‘development expenditures’ make up to 80 per cent of the spending. The development expenditures refer to expenditures on various socio-economic development programs in the social sectors and economic sectors.

The ‘development expenditures’ of the State governments are grouped into two broad categories: social services and economic services. The social services include health and education. The economic services include development programs in different sectors of the economy particularly in infrastructure. For example, revenue expenditures on programs relating to agriculture, roads, electricity, and industries are grouped under economic services. These are not capital expenditures but relate to expenditures on operation and maintenance of on-going programs.

Data were obtained from the Handbook of Statistics on State Government Finances (RBI, 2004) and previous publications on State Finances by the Reserve Bank of India (RBI). The State level population estimates are obtained by interpolating decadal Census estimates to obtain per capita expenditures for the States. The values in current prices are deflated by the wholesale price index to obtain expenditures and GSDP in real or constant prices.

The trends in government development expenditures, are examined in a regression model in the framework of the ‘convergence analysis’. Although the underlying theoretical arguments are quite different, the methodology of income convergence analysis of Barro and Sala-i-Martin (1995) provides a useful tool to examine whether the disparity across States in State government expenditures is increasing.

The conditional convergence regression model we used is:

$$\left\{\frac{1}{t-t_0}\right\}\ln\left(\frac{PCRE_t}{PCRE_{t_0}}\right)=\alpha_0+\alpha_1\left\{\frac{1}{t-t_0}\right\}\ln PCRE_{t_0}+\alpha_2\ln PCY_{t_0}+\alpha_3 STPOP+\alpha_4 DCI+u \quad (1)$$

Where

PCRE = Per capita real state government expenditures.

PCY = Per capita real gross state domestic product (average of three years ending in year t or t0 in all cases except for 1980-81 where the average is for three years beginning in 1980-81; the averages are taken to remove abnormal data points).

$t_0$ = Beginning year of the time period.

t = Ending year of the time period and rest of the variables are as defined earlier.

DCI = fiscal decentralization index, which is the share of State's revenue including statutory transfers to State's expenditures.

Given our interest in welfare indicators, we have extended the analysis to cover four types of development expenditures of the state governments: (1) expenditure on economic services within development expenditures; (2) expenditure on social services within development expenditures; (3) expenditure on medical and public health services within social expenditures; and (4) expenditure on education services within expenditures on social services. We have examined the pattern of expenditure for the periods of 1993–94, when the Constitutional Reforms were passed to empower the third tier of local governance, to 1999–2000.

We are not particularly interested in the steady state levels of expenditures, but merely to examine if the expenditures across States are likely to be 'converging' or 'diverging' over time. The convergence would imply that the disparity is likely to be declining and divergence would imply the opposite. In the above equation, if the coefficient '$\alpha_1$' is positive, the per capita expenditures of the different States would be moving at different rates, with the 'higher expenditure state' increasing expenditures faster than the 'lower expenditure States'. Therefore, there would be no convergence of per capita expenditures across States and the disparity would increase over time. If the coefficient is negative, then the per capita expenditures would be converging or disparity would decrease over time. If the coefficient is zero, then again disparity would not be rising. The role of per capita real GSDP in the equation is to control for overall 'initial conditions' of the state economy. If the average income (per capita GSDP) is larger in one state as compared to the other, the expenditures may also be higher because of the availability of larger resources (through own taxes) to that state. Once we control for this variable, the pattern that remains should reflect the influence of the other factors, including the devolution of resources from the Central government to the States, on the tendencies of the States to spend. In order to control for this latter aspect of Central government transfer and also the capacity of the state to collect revenue, the decentralization index (DCI) has been used as another controlling variable. As the earlier results show that the presence of the ST population has positive impact on overall economic growth, it is also used as a conditional variable in equation (1).

The results obtained from applying the ordinary least squares method of estimation to equation (1) with different dependent variables with concerned independent variables explained above are summarised in Table 5. The expenditures on 'social services' show a statistically significant convergence pattern more consistently than the expenditures on ‘economic services’. In fact, the expenditures on ‘economic services’ show no convergence. Thus, State government expenditures on social sectors appear to be pro-spatially equitable than the expenditures on ‘economic services’.

Within the ‘social services’, expenditures on both ‘health’ and education’ services show statistically significant convergence for in the post-reform periods indicating that the mechanisms driving these expenditures are based more uniformly on the needs of population across all regions of the country.  The coefficients of decentralization index and the ST 4population are positive and significant at the 5 per cent level for social services, medical and public health, and education expenditures. These results support the thesis that greater decentralization improves overall economic growth, which in turn facilitates higher expenditure on social services. Further, the significant and positive coefficient of ST population implies that State governments do pay special attention towards the improvement of welfare of ST population, though the Central transfer to States does not give any priority for the presence of ST population in States. However, these coefficients are not significant for the economic services expenditures.[5] The initial condition of average per capita GSDP does not influence the dynamics of expenditures.

The above results indicate that decentralization appears to be an important instrument facilitating convergence of ‘social services’ expenditures across States. However, what is more important is to examine whether decentralisation has contributed to rural development within the third tier of governance because 70% of India’s population still live in rural areas.

Therefore, next, we examine the impact of decentralisation on rural development within the third tier of governance, which has bearings on the effective functioning of decentralisation. Table 6 shows States’ per capita expenditure through Urban Local Bodies and Panchayati Raj Institutions in India during the period 2002–2003. The average figure for Urban Local Bodies - All States per capita expenditure was Rs. 463, while the average sum for Panchayati Raj-All States per capita expenditure was Rs. 316. Though the average figures do not differ very much, the figures across States vary widely. Many States per capita expenditure through Panchayati Raj Institutions were much below the All States average. Thus, the State-wise

[5] The analysis presented here does not clarify, if the patterns of divergence or convergence are a result of higher growth of expenditures by the low expenditure States or declining rates of growth of expenditures in the ‘high’ expenditure States. In other words, the fiscal imbalances that result from increased expenditures may also act as a moderator of spending behaviour at the State level.

figures do provide an indication about whether Panchayati Raj Insitutions are functioning effectively or not. Karnataka State has been in the front in terms of effective functioning of Panchayati Raj Institutions. Therefore, we use the ratio of per capita expenditure of Panchayati Raj (rural) institutions to per capita expenditure of Urban local bodies as a proxy measure for rural development in the context of decentralisation. The following regression model was formulated:

$$RPEUL = \alpha_0 + \alpha_1 LIT + \alpha_2 \ln PCY_{t_0} + \alpha_3 STPOP + \alpha_4 DCI + \alpha_5 WL + u$$

Where RPEUL is a measure for effective functioning of decentralisation, which is defined here as the ratio of per capita expenditure of Panchayati Raj (rural) institutions to per capita expenditure of Urban local bodies. The rest of the variables are as defined above. The above equation was estimated using State wise data from the post-reform period of 1993-94 to 1999-2000. The fixed effects model estimates of the equation are as follows:

$$\underset{}{RPEUL} = \underset{(0.0443)}{0.1277} + \underset{(0.0215)}{0.0432LIT} + \underset{(0.1689)}{0.3478\ln PCY_{t_0}} + \underset{(0.0516)}{0.1033STPOP} + \underset{(0.0728)}{0.1455DCI} + \underset{(0.0159)}{0.0086WL} + u$$

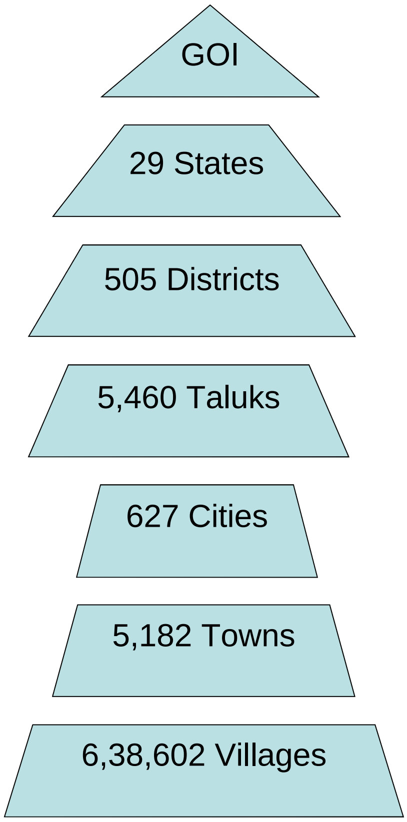
The above results confirm that decentralisation contributes positively to rural development by facilitating an increase in per capita expenditure of Panchayati Raj. However, the magnitude of increase is not impressive, though it is statistically significant at the 5% level. The implication is that decentralisation needs to be more effective in promoting the activities of Panchayati Raj Institutions through increasing the provision of resource allocation in majority of States. Thus, the demand for effective institutional reforms need not be overemphasised here, though as Howes, Lahiri, and Stern (2003) have argued, ‘governance plays an important role in implementing policy initiatives, both financial and non-financial.’

## Conclusions

The economic and Constitutional reforms of the 1990s have given more space to the markets in the allocation of resources as compared to the state relative to the pre-reform days. What implication does this have to the spatial equity in development? The state continues to be responsible for the supply of public goods including basic human capital and infrastructural development services across the country. Analyses presented in this study suggest that the mechanisms by which state governments provide for resources for such services do not continuously lead to higher inter-state disparity. If this pattern is a result of equitable sharing of central resources by the states or the effective functioning of decentralisation, this element of state behaviour is important in keeping the inter-state disparities from widening. Further, the results also point out that the expenditures on basic services such as health and education are pro-spatially equitable than the economic services.

Overall, the results in this study indicate that Government of India within a federal framework has mechanisms that foster development equitably across its States, particularly through health and education expenditures aimed at improving human capital development. In this context, the importance of decentralisation should be noted. However, the slowly rising disparities in economic services across States warrant the attention of the Central and State governments. Further, as decentralisation does not appear to be contributing significantly to rural development, the structural aspect of decentralisation needs to be re-examined. Therefore, drawing on Hayami (2001) and Rao et al., (2008), it is conjectured that such tendencies arise mainly due to lack of appropriate and efficient institutions and human capital at the State and Central governments levels in India, which indicates the need for further institutional reforms. In this context, it is worth noting the following statement that appears in the Planning Commission's Eleventh Five Year Plan: "Much higher levels of human development can be achieved even with the given structure of the economy, if only the delivery system is improved" (Planning Commission, 2008, p.2).

Figure 1: The Structure of Indian Federalism




*Source*: Planning Commission.

Table 1. The pace of development and spatial balance in development:
Selected human development indicators

| Year | Life expectancy at birth | | Year | Infant mortality rate (per thousand) | | Year | Literacy rate | |
|---|---|---|---|---|---|---|---|---|
| | Average | CV | | Average | CV | | Average | CV |
| 1983 | 60.2 | 0.7398 | 1971 | 121 | 0.0565 | 1971 | 32.8 | 0.0830 |
| 1988 | 61.1 | 0.7299 | 1976 | 123 | 0.0650 | 1981 | 42.2 | 0.0655 |
| 1990 | 59.2 | 0.7541 | 1981 | 107 | 0.0681 | 1991 | 51.2 | 0.0575 |
| 1991 | 59.7 | 0.7472 | 1986 | 95 | 0.0685 | 2001 | 63.9 | 0.0370 |
| 1993 | 60.5 | 0.7376 | 1991 | 77 | 0.0708 | | | |
| 1995 | 61.2 | 0.7298 | 1994 | 53 | 0.1237 | | | |
| 1999 | 62.1 | 0.7197 | 1998 | 66 | 0.0670 | | | |
| 2000 | 62.3 | 0.7175 | 2005 | 54 | 0.0680 | | | |
| 2001 | 62.5 | 0.7157 | | | | | | |
| 2003 | 63.0 | 0.7107 | | | | | | |

Note: The coefficient of variation is calculated over data for 15 major states of India.
The CV is estimated as a weighted measure using population shares of the states as weights.

**Table 2. The pace of development and spatial balance in development: Selected infrastructural development indicators**

| Year | Telecom density (% population) | | Year | Electricity consumption (kwh) | |
|---|---|---|---|---|---|
| | Average | CV | | Average (per capita) | CV |
| 1980 | 0.38 | 0.3350 | 1975 | 97 | 0.1157 |
| 1985 | 0.40 | 0.1661 | 1980 | 121 | 0.1322 |
| 1987 | 0.47 | 0.1717 | 1983 | 150 | 0.1335 |
| 1988 | 0.48 | 0.1720 | 1985 | 168 | 0.1298 |
| 1989 | 0.52 | 0.1726 | 1987 | 196 | 0.1352 |
| 1990 | 0.55 | 0.1670 | 1990 | 232 | 0.1285 |
| 1991 | 0.62 | 0.1654 | 1991 | 247 | 0.1244 |
| 1992 | 0.71 | 0.1603 | 1992 | 263 | 0.1268 |
| 1993 | 0.83 | 0.1592 | 1993 | 288 | 0.1197 |
| 1994 | 1.00 | 0.1606 | 1994 | 306 | 0.1234 |
| 1995 | 1.20 | 0.1629 | 1996 | 336 | 0.1235 |
| 1998 | 1.68 | 0.1275 | 2002 | 359 | 0.1597 |
| 1999 | 2.37 | 0.1499 | 2004 | 387 | 0.1523 |
| 2000 | 2.68 | 0.1498 | | | |
| 2003 | 4.24 | 0.1555 | | | |
| 2004 | 5.69 | 0.1618 | | | |
| 2006 | 10.74 | 0.1250 | | | |
| 2007 | 15.85 | 0.1139 | | | |

See Note to Table A1.

Table 3. Trends in State's own Revenue Receipts and Revenue Expenditures

| Year | state's own receipts to total receipts (%) | state's rev. expend. to total expend (%) | State's own rev. receipts To state's rev. expend (%) |
|---|---|---|---|
| 1990-91 | 35.2 | 54.6 | 53.1 |
| 1995-96 | 39.2 | 57.0 | 58.6 |
| 1999-00 | 38.6 | 56.4 | 49.8 |
| 2000-01 | 37.8 | 56.0 | 48.6 |
| 2001-02 | 40.2 | 56.9 | 50.0 |
| 2002-03 | 38.28 | 54.31 | 56.01 |
| 2003-04 | 37.54 | 56.27 | 53.83 |
| 2004-05 | 38.10 | 56.28 | 60.05 |
| 2005-06 | 37.07 | 56.59 | 56.07 |

*Source*: Table 7 in Rao, Sen, and Jena, (2008).

## Table 4: Finance Commission (FC), Planning Commission, and Non-statutory transfer of resources from the Centre to states

A. Vertical Transfer

Transfers from Centre to States as Percentage of Gross Revenue Receipts of the Centre:

| Period | Finance Commission Transfers | | | Other Transfers | | | Total Transfer (4+7) |
|---|---|---|---|---|---|---|---|
| | Share in Central Taxes (%) | Share in Grants (%) | Total Transfers through Finance Commission (2+3) (%) | Grants Through Planning Commission (%) | Non-plan Grants (Non-Statutory) (%) | Total Other Transfers (5+6) (%) | (%) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| VII FC | 22.39 | 1.96 | 24.35 | 12.11 | 1.66 | 13.77 | 38.11 |
| VIII FC | 20.25 | 2.52 | 22.77 | 13.56 | 1.54 | 15.1 | 37.86 |
| IX FC | 21.37 | 3.42 | 24.79 | 14.48 | 1.06 | 15.54 | 40.33 |
| X FC | 21.4 | 2.34 | 23.75 | 10.57 | 0.63 | 11.19 | 35.79 |
| XI FC (1st 2 years) | 20.93 | 5.2 | 26.13 | 10.39 | 0.82 | 11.21 | 37.2 |

B. Horizontal Transfer

Formula of 12th Finance Commission (2005-2010)

| Criteria | Weight (%) |
|---|---|
| Population | 25 |
| Income | 50 |
| Area | 10 |
| Tax Effort | 7.5 |
| Fiscal Discipline | 7.5 |

Gadgil Formula used in X Plan (2002–2007)

| Criteria | Weight (%) |
|---|---|
| Population | 60 |
| Per capita income | 25 |
| Tax efforts | 7.5 |
| Fiscal Management | 7.5 |

*Source*: Authors' compilation from various Planning Commission Plan Reports and Finance Commission Reports.

## Table 5: Results of regression analysis of inter-state disparity in state government expenditures

| Expenditures | $PCRE_{t0}$ | $PCY_{t0}$ | STPOP | DCI |
|---|---|---|---|---|
| Eco. Services | 0.3129(0.2952) | 0.2882(0.2416) | 0.1762**(0.0807) | 0.1774**(0.0878) |
| Social Services | -0.2627**(0.1292) | 0.1955**(0.0899) | 0.1881**(0.0920) | 0.1375**(0.0640) |
| Pub. Health | -0.2772**(0.1355) | 0.2174**(0.1080) | 0.1825**(0.0875) | 0.1448**(0.0723) |
| Education | -0.2028**(0.1004) | 0.2072**(0.1033) | 0.1954**(0.0961) | 0.1220**(0.0589) |

*Note*: ** refers to significant at the 5 per cent level.

Table 6: Per Capita Expenditure through Urban Local Bodies and Panchayati Raj Institutions in India, 2002–2003

| State | Per capita expenditure through Urban local bodies (Indian Rupees) | Per capita expenditure through Panchayati Raj Institutions (Indian Rupees) |
|---|---|---|
| Himachal Pradesh | 854 | 59 |
| Madhya Pradesh | 762 | 110 |
| Tamil Nadu | 727 | 153 |
| Manipur | 720 | 37 |
| Kerala | 693 | 742 |
| Andhra Pradesh | 657 | 898 |
| Gujarat | 653 | 783 |
| Punjab | 639 | 108 |
| Chattisgarh | 614 | 355 |
| Rajasthan | 523 | 382 |
| Maharashtra | 489 | 821 |
| Goa | 443 | 419 |
| West Bengal | 426 | 30 |
| Uttranchal | 398 | 46 |
| Karnataka | 329 | 1147 |
| Uttar Pradesh | 315 | 44 |
| Orissa | 395 | 57 |
| Tripura | 287 | 253 |
| Jarhgand | 192 | 0 |
| Jammu and Kashmir | 192 | 851 |
| Assam | 174 | 3 |
| Bihar | 162 | 40 |
| Haryana | 143 | 24 |
| Mehalaya | 124 | 25 |
| Mizoram | 33 | 34 |
| | | |
| All States average | 463 | 316 |

*Source*: (Basic Data) Report of XII Finance Commission, 2005.

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