



ISSN Print: 2394-7500  
ISSN Online: 2394-5869  
Impact Factor: 5.2  
IJAR 2015; 1(10): 87-91  
www.allresearchjournal.com  
Received: 15-07-2015  
Accepted: 20-08-2015

**Biswajit Mohanty**  
PhD Scholar, Department of  
Business Economics,  
University of Delhi,  
Email:biswajitm4@gmail.com

## The paradox of regional disparity in India: Insights from the literature

**Biswajit Mohanty**

### Abstract

A paradox of growth experiences across states in India is the problem of regional disparity despite adoption of several regional development policies, spanning over six decades of economic planning. Seeking an explanation for the puzzle, this paper reviews the literature on regional growth. While the existing approaches to analyzing regional growth patterns are devoted to the determinants and the problem of convergence and divergence, an emerging approach, namely the New Economic Geography literature has added a new dimension, i.e., role of space. Given that precious little has been done using the latter approach in India, the review suggest that studies on spatial aspect may throw new light on the regional disparity puzzle in India.

**Keywords:** Regional growth, regional development policies, India

### Introduction

A paradox of growth experiences across states in India is the persistence of regional disparity despite several policies for regional development followed during six decades of planned development. This raises a doubt that perhaps the academic and policy debates have failed to capture some essential aspect of the regional growth process in India. The explanation for the nature of regional growth is offered by different theories of regional growth. While much of the debate in the theories is based on the issue of convergence or divergence of growth among regions, the emergence of the theories of New Economic Geography (NEG) has brought into focus the role of space as an essential aspect for interpretation of the regional growth process. This paper reviews different theories, highlighting their major elements, and explains how the NEG theories may help to demystify the regional growth paradox in India. The paper is organized into the following sections. Section 2 describes the paradox of regional disparity in India. This is divided into two subsections. While the first one briefly describes the regional development policies in India since the beginning of Five Year Plans, the second one gives a brief profile of regional growth and disparity in India. Section 3 reviews the theories of regional growth and the empirical literature in India in this context. Section 4 concludes with directions for further research.

## 2. The paradox of regional disparity in India.

### 2.1. The persistent regional disparity

A widespread perception about the growth experiences across states is the striking disparity, which is increasing over the years. This perception is shared by a number of studies<sup>1</sup> and firmly supported by the available statistical indicators. Table-1.1 presents summary indicators of disparity in per capita income across states. Ratio of minimum to maximum per capita GSDP, having decreased from 30.52 to 21.55 from 1993-94 to 2001-02, has averaged around 20 percent for the later years, indicating that the gap between highest and lowest per capita income states is not narrowing down. Similarly, increasing coefficient of variation of per capita income shows that income inequality across states is worsening. The 12<sup>th</sup> Five Year

**Correspondence**  
**Biswajit Mohanty**  
PhD Scholar, Department of  
Business Economics  
University of Delhi,

<sup>1</sup> Cashin & Sahay(1996)<sup>[9]</sup>, Ahluwalia(2002)<sup>[3]</sup>, Nagaraj et al(1998)<sup>[17]</sup>, Bhattacharya & Sakthivel(2004)<sup>[8]</sup>, Kar, S. and Sakthivel, S. (2007)<sup>[13]</sup>

plan notes that the reasons for the persistence of wide disparity in per capita income is not only that low per capita states such as Uttar Pradesh, Bihar and Rajasthan, Odisha and Madhya Pradesh have low growth rates but also high growth rates of population. Table-1.2 reflects this trend which has prevailed strongly during 8<sup>th</sup> and 9<sup>th</sup> Plan and somewhat during the Tenth Plan. The trend in growth rates has been reversed during the 11<sup>th</sup> Plan, showing signs of convergence,

but this still was unable to make any dent on the widening disparity in per capita income. The inter-state inequalities in per capita incomes have been a cause of concern in policy circles and, accordingly, target growth rates are being specified for each state, beginning with the 10<sup>th</sup> Plan. The growth targets for states in the 12<sup>th</sup> Plan are shown in the last column of Table-1.2.

**Table-1.1:** Disparity in Per capita GSDP

Year	State with lowest Per capita GSDP	State with highest Per capita GSDP	Ratio of Min to Max per capita GSDP	Coefficient of variation
1993-94	Bihar	Punjab	30.5	34.6
1996-97	Bihar	Maharashtra	27.6	36.8
1999-2000	Bihar	Maharashtra	28.9	37.4
2001-02	Bihar	Punjab	21.6	35.6
2002-03	Bihar	Punjab	21.6	36.7
2003-04	Bihar	Punjab	22.7	36.2
2004-05	Bihar	Haryana	21	36
2005-06	Bihar	Maharashtra	19	39
2006-07	Bihar	Maharashtra	20	40
2007-08	Bihar	Maharashtra	18	40
2008-09	Bihar	Maharashtra	20	40
2009-10	Bihar	Haryana	20	41
2010-11	Bihar	Maharashtra	20	42
2011-12	Bihar	Maharashtra	20	42

Source: 11<sup>th</sup> and 12<sup>th</sup> Five Year Plan Documents, Volume-I

The persistent disparity poses a paradox as India has adopted several policies for removal of regional balance since the beginning of the Planning period. The next sub-section takes

stock of the major policies of regional development during the pre and post reform years.

**Table 1.2:** Average Growth Rates in SDP (in % per annum)

Sl. No.	States/UTs	Eighth 1992-97	Ninth 1997-2002	Tenth 2002-07	Eleventh 2007-12	Targets for Twelfth 2012-17
1	Andhra	5.4	5.5	8.2	8.2	8.3
2	Bihar	3.9	3.7	6.9	9.9	10
3	Chhattisgarh			8.8	7.7	8
4	Goa	9	5.7	8.5	9.1	8.5
5	Gujarat	12.9	2.8	11	9.5	9.2
6	Haryana	5.2	6.1	9	9	9
7	Jharkhand			5	9.3	8.5
8	Karnataka	6.2	5.8	7.7	7.2	7.5
9	Kerala	6.5	5.2	8.3	8.2	8
10	M.P	6.6	4.5	5	9.2	8.8
11	Maharashtra	8.9	4.1	10.1	8.6	8.6
12	Odisha	2.3	5.1	9.2	7.1	8
13	Punjab	4.8	4	6	6.7	6.5
14	Rajasthan	8	5.3	7.1	8.5	7.2
15	T. N	7	4.7	9.7	7.7	7.7
16	U.P	5	2.5	5.8	7.1	7.2
17	West Bengal	6.3	6.5	6.2	7.3	7
Special category states						
18	Arunachal	5	6.6	6.2	8.5	8.5
19	Assam	2.8	1.8	5	6.8	7
20	Himachal	6.5	6.3	7.6	8	8
21	J& K	5	4.2	5.5	5.9	6.5
22	Manipur	3.7	4.7	5.7	6.2	6.5
23	Meghalaya	4	7.2	6.7	7.8	8
24	Mizoram		5.7	5.9	10.8	9
25	Nagaland	7.2	6.5	7.4	6.2	7
26	Sikkim	4.6	6.6	7.7	22.8	8.5
27	Tripura	6.7	9.4	6.9	8.9	8.2
28	Uttarakhand			11.7	12.8	9.5

Source: 12<sup>th</sup> Five Year Plan Documents, Volume-I

## 2.2. Regional Development Policies in India

Though the First Five year Plan did not lay emphasis on regional balanced development as an objective of economic planning in India (Awasthi, 1991)<sup>[6]</sup>, the later plans made regional balanced development as one of the central objectives of planning in the country. The measures for balanced regional development undertaken since then till the economic reform of 1991 include policies such as industrial licensing system to direct investment into lagging areas, identification of industrial estates, or growth centers, for investment in infrastructure, financial incentives for private industrial investment in lagging states and districts, development of irrigation, agriculture, and allied activities, provision of infrastructural facilities such as transport, communications, banking, etc. in backward regions. There are also transfer of resources from centre to states in the form of plan assistance, non-plan assistance, and discretionary grants in such a way as to reduce regional disparities. Further, there are special programmes for the development of backward and less developed regions. These include Hill Area Development Programme, Western Ghats Development Programme for eco-preservation and eco-restoration along with sustainable use of biodiversity in hill areas and Western Ghats respectively and Border Area Development Programme for border districts of 17 states located along the international land border.

After the Economic reforms of 1991, there is restricted space for national policy due to diminishing role of government and increasing reliance on market forces and the role of private sector. Further, with the decentralisation of administrative power and empowerment of local administrative bodies or panchayats brought about by the 73<sup>rd</sup> and the 74<sup>th</sup> constitutional amendments, there is increasing role of sub-national policies for economic development at the state level. Regional development policies of the central government mostly consist of targeted approach by regions and sectors (Aggarwal and Singh, 2014)<sup>[2]</sup>.

The region-specific policies include Backward region Grants Fund to provide financial resources for development of backward districts, the Central Capital Investment Subsidy Scheme for industrial development of Jammu and Kashmir, tax and excise concessions for industrial sector in Himachal Pradesh and Uttarakhand, North East Industrial Policy (NEIP) for developing the industrial infrastructure in the North-East region. The earlier policies such as Hill Area Development Programme, Western Ghats Development Programme and Border Area Development Programme are also being continued. The sector specific policies for promoting regional development include incentives such as excise duty exemption for small-scale sector, the enactment of Micro, Small, and Medium Enterprises Development Act to promote Micro, Small, and Medium Enterprises. There are also programmes such as National Rural Employment Guarantee Programme (NREGP), Sarva Shiksha Abhiyan (SSA) and National Rural Health Mission related, which are meant for employment generation, education and health goals, particularly in backward areas.

On the other hand, the increasing role sub-national policies is visible in reforms at local level in the form of efforts of each individual state to woo foreign capital and technology by reducing hurdles in bureaucracy, land acquisition, environment clearances for investment projects.

To sum up, despite the implementation of several policies

since the beginning of Plan periods for removal of regional imbalance, regional disparity in per capita income and growth persists and continues to be a concern in the policy circle. Now, what could be the reason for the regional development policies not being able to make a mark on the problem of regional disparity? The explanation may have to do with how far these policies have been based on the understanding of the regional growth process. The next section provides a brief review of the traditional as well as emerging approaches for understanding the regional growth process.

## 3. The Nature of Regional Growth Process: Analytical / Theoretical Approaches

The explanation for the nature of regional growth is offered by different theories of regional growth. The mainstream theories include Neo Classical growth theory, export base theory, post-Fordism, innovative milieus and 'learning' regions theory, Endogenous Growth Theory and New Economic Geography (NEG) theory<sup>2</sup>. The interpretation of regional growth process as offered by the theories can be distinguished to have two important dimensions. The first relate to the explanation of convergence or divergence of growth among regions and the second one is the spatial dimension of the growth process.

In respect of the first dimension, regional growth theories can be discerned as theories of convergence, divergence, and both convergence and divergence. The regional convergence in growth rate is predicted by Neo Classical theory. The drivers of the growth process are mobility of the factors of production, inter-regional trade and technology transfers- all of which bring about reduction in regional disparities among regions through diminishing returns and perfectly functioning market mechanism.

Theories of divergence include the export base theory, post-Fordism, innovative milieus and 'learning' regions theory, and endogenous growth theory. Among these theories, endogenous growth theory ascribes regional disparity to variation in technological progress, which is rendered endogenous through several channels generating increasing returns such as investment in human capital, scale effects, spillovers from investment in physical capital and R&D, and the provision of public services. The rest of the theories explain regional growth divergence in terms of industrialization and creation of industrial clusters along with a cumulative causation mechanism due to which growth in a region becomes cumulative.

NEG theory offers the possibility of both regional convergence and divergence. Regional divergence is ascribed to agglomeration forces, mainly 'technological or knowledge spillovers' by which the regions with agglomeration of firms grow faster than other regions. On the other hand, regional convergence is also a possibility due to negative externalities such as rise in factors prices, increase in cost of living due to congestion from excessive agglomeration, the global (benefiting all regions) nature of technological spillovers, substantial decline in transport costs etc.

Apart from the determinants of regional growth and processes of convergence and divergence, the role of space is an important aspect that must be understood for a clear insight into the nature and determinants of the regional growth process. Space influences an economy in several

<sup>2</sup> Armstrong and Taylor (2000)<sup>[5]</sup>

ways. The advantages or disadvantages of space can manifest in terms of differences in geographical distribution of productive resources and economic activities, and spatial proximity is associated with positive externalities that reduce costs of production and transaction. However, it is only with the emergence of NEG theories, especially with the synthesis of NEG and endogenous growth theories that space has been given due attention in policy circles and academic debates. Space is visualized as a key driver of the regional growth process, as a source of increasing returns and externalities in the form of economies of agglomeration and localization. Thus, NEG theory explains regional growth in terms of geographical spillovers and spatial concentration of activities, that is, there are certain places that are centres of development around which productive activities concentrate due to the economies of agglomeration. As a result, there are not only differences in growth rate of income across the regions but within regions too.

In view of the possibility of spatial concentration of economic activities, pointed out by the NEG theories, spatial distribution of economic activities may not be random for which regional data may show a spatial pattern or order. Further, if geographical spillovers do matter in the growth process, empirical studies would do better to include such effects and also the interaction of growth process across regions (Gallo *et al.*, 2003)<sup>[15]</sup>. With the publication of the book on Spatial Econometrics: Methods and Models by Anselin (1988)<sup>[4]</sup>, there is a spurt in empirical literature<sup>3</sup> incorporating spatial interaction and spatial structure in the regional growth process over the last two decades. The empirical literature describes the spatial distribution of economic activities, i.e., the different patterns of clustering of rich regions and poor regions, in terms of two types of spatial effects: spatial heterogeneity and spatial dependence. Spatial heterogeneity refers to the instability of economic behaviour over space (Ertur and Julie Le Gallo, 2009)<sup>[10]</sup>. Thus, economic behaviour in the centre of a city is different from that in the periphery of a city, in an urban region from a rural region. Spatial heterogeneity characterise the polarization (core or rich regions vis-à-vis the periphery or poor regions) phenomenon in space (Gallo *et al.*, 2003)<sup>[15]</sup>. On the other hand, spatial dependence or autocorrelation among regions is observed when the observations at one location depend on the values of observations at other locations. For example, in case of positive spatial autocorrelation regions with similar rate of growth (rich regions or poor regions) tend to cluster in space, while regions with dissimilar rate of growth (rich-poor) cluster in case of negative spatial autocorrelation.

In the empirical literature on regional growth in India, most of the existing studies are directed towards the question of convergence or divergence while a few studies have touched upon the spatial dimension. Studies finding convergence include Cashin & Sahay (1996)<sup>[9]</sup>, Patel (2003)<sup>[18]</sup>, Nagraj *et al.* (1998)<sup>[17]</sup>, while many studies such as, Marjit & Mitra (1996)<sup>[16]</sup>, Sachs *et al.* (2002)<sup>[19]</sup>, Ahluwalia (2002)<sup>[3]</sup> find divergence in per capita income among the states. On the other hand, several studies such as Trivedi (2002)<sup>[20]</sup>, Bandyopadhyay (2006)<sup>[7]</sup>, Ghosh (2008)<sup>[12]</sup>, find club convergence within different groups of states while divergence exists across groups. Most of the studies have

relied on either the neoclassical or the endogenous growth models. Only two studies Chakravorty (2003)<sup>[11]</sup> and Khomikova(2008)<sup>[14]</sup> have considered the role of space and geography in regional development in India. While the former deals with the spatial patterns of industrial investment in India, the latter investigates the spatial distribution or clustering of gross state domestic product at the aggregate and sectoral level to explain the continuation of regional divergence in India. While the connotation of space in these studies is limited to the aggregate state level, finer exposition of the regional growth may be possible with more disaggregated space, viz., districts. Further, in order to understand the paradox of regional disparity in spite of the regional development policies over the years, it may perhaps be useful to explore how the outcome of different policies such as foreign direct investment or infrastructure are distributed or clustered in space.

#### 4. Conclusion

To sum up, the theories of Regional growth explains the regional growth process by a set of factors (capital, labor, technological progress, public expenditure, human capital, export demand, industrial clusters, agglomeration or spatial concentration) and some conditions (diminishing or increasing returns, free mobility of factors). Based on these factors and conditions, they predict either convergence or divergence or the possibility of both convergence and divergence in growth among regions. While the Neo Classical theory, the export base theory, post-Fordism, innovative milieus and 'learning' regions theory, endogenous growth theory predict convergence or divergence among regions, the NEG theories offer the explanation of both divergence and convergence of growth among regions.

The NEG also adds a new dimension to the understanding of regional growth by emphasizing the role of space in the growth process in the form of spatial agglomeration or spatial concentration of economic activities and spatial spillovers. Hence, for a proper understanding of the existence of regional growth and disparity, it is not only necessary to look into the possible factors of regional growth but also to explore the role of space and spatial feature of the growth process. Given that academic research in India has paid little attention to the role of space in regional growth, rigorous and increasing number of studies on the spatial dimension of regional growth may hold a key to the explanation of the paradox of persistent regional disparity in India.

#### References

1. Abreu M, Groot H, Florax R. Space and growth: A survey of empirical evidence and methods. *Région et Développement* 2005; 21:13-44.
2. Aggarwal A, Singh P. Regional Development Polices in India (With Prakash Singh) in T. Farole (eds) *The Internal geography of trade: Lagging regions and Global Markets* World Bank, Washington DC, 2014.
3. Ahluwalia MS. 'State-Level Performance under Economic Reforms in India' in A O Krueger (ed), *Economic Policy Reforms and the Indian Economy*, Oxford University Press, New Delhi, 2002.
4. Anselin L. *Spatial econometrics: Methods and Models*, Kluwer Academic Publishers, 1988
5. Armstrong Harvey. Taylor, Jim. *Regional Economics and Policy* (third edition), Oxford: Blackwell, 2000.
6. Awasthi DN. *Regional Patterns of Industrial Growth in*

<sup>3</sup> Some of the major works are Fingleton(1999), López-Bazo *et al.*(1999), Le Gallo and Ertur(2003), Gardiner *et al.*( 2004), Ertur *et al.* (2006). See Abreu *et al* (2005)<sup>[11]</sup> for a survey of the literature

- India, New Delhi: Concept Publishing, 1991.
7. Bandyopadhyay S. "Rich States, Poor States: Convergence and Polarization in India", Oxford Department of Economics, Discussion, 2006, 266.
  8. Bhattacharya BB, Sakhivel S. 'Regional Growth and Disparity in India', Economic and Political Weekly, March, 2004.
  9. Cashin P, Sahay R. 'International Migration, Centre-State Grants, and Economic Growth in the States of India', IMF Staff Papers, 1996, 43(1).
  10. Cem Ertur, Julie GalloLe. Regional Growth and Convergence: Heterogenous reaction versus interaction in spatial econometric approaches, Post-Print hal-00463279, HAL, 2009.
  11. Chakravorty S. Industrial location in post-reform India: patterns of inter-regional divergence and intra-regional convergence, Journal of Development Studies. 2003; 40(2):120-152.
  12. Ghosh M. Economic Reforms, Growth and Regional Divergence in Indian, Margin: The Journal of Applied Economic Research. 2008; 2:265-285.
  13. Kar S, Sakhivel S. Reforms and Regional Inequality in India, Economic and Political Weekly, 2007, 42(47).
  14. Khomikova T. Spatial Analysis of Regional Divergence in India: Income and Economic Structure Perspectives, the International Journal of Economic Policy Studies, 2008, 3(7).
  15. Le Gallo J, Ertur C, Baumont C. A Spatial Econometric Analysis of Convergence across European Regions, 1980–1995, In: Fingleton, B (ed) European Regional Growth. Springer, Berlin, Heidelberg and New York, NY, 2003.
  16. Marjit S, Mitra S. Convergence in Regional Growth Rates: Indian Research Agenda, Economic and Political Weekly, August, 1996.
  17. Nagaraj R, Varoudakis A, Veganzones M. Long-Run Growth Trends and Convergence Across Indian States, Technical OECD Development Centre, Paris, France, 1998, 131.
  18. Patel T. Convergence among the States of India in the Time Period from 1980 to 1999, Master Degree Dissertation, Graduate School, University of Florida, 2003.
  19. Sachs JD, Bajpai N, Ramiah A. Understanding Regional Economic Growth in India, Asian Economic Papers 2002; 1(3):32-62.
  20. Trivedi K. Regional Convergence and Catch-up in India between 1960 and 1992, Economics paper, Nuffield College, University of Oxford, 2002.