

# Has Odisha Become Less Poor in the Last Decade?

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Though there has been overall economic progress in India in the post-reform period, it has not been uniform across the country. This article points out that contrary to popular perception, Odisha gradually improved its relative economic position in the second half of the post-reform period. This is evident both in terms of per capita income and key socio-economic indicators. A household survey undertaken to assess the situation at the grass-roots level also corroborates this. An analysis of the information from the survey also suggests that good irrigation facilities, road connectivity, and proximity to vibrant economic activities, such as mining and industry, facilitate more earning and a better standard of living.

## 1 Introduction

The post-reform period in India has on the whole seen a significant increase in economic activities. Average economic growth between 1992 and 2013 was close to 7%, compared to around 3.5% in the first three decades following Independence. Before the recent economic slowdown, India was the second fastest growing economy in the world, next only to China. With its growing importance in export of services, it was suggested that India was emerging as the world's office, if China was the world's factory (Nayyar 2006). The percentage of the poor declined significantly – from 45.3% in 1993-94 to 37.2% in 2004-05, and still further down to 29.8% in 2009-10.<sup>1</sup> Nevertheless, concerns persist in several areas, a major one being the non-uniform spread of growth across regions in India. It is generally believed that the poor states in the country have continued to remain poor in the post-reform period, and, worse still, that the gap between the rich and poor states has widened.<sup>2</sup>

Despite balanced growth being a stated objective of development planning in India, the country's record in reducing inter-regional disparity is far from satisfactory. As Dandekar (1993) observed, the poor states continued to remain poor and the rich states continued to remain rich in the pre-reform period. The post-reform period did not seem to change the situation for the better, and several empirical studies analysing convergence conditions have not found any satisfactory improvement. According to Ahluwalia (2000), per capita gross state domestic product (GSDP) growth rates accelerated in the 1990s in the upper end of the spectrum (Gujarat and Maharashtra), while it decelerated in the weaker states (Bihar, Uttar Pradesh and Odisha). The Gini coefficient increased from 0.15-0.16 during the 1980s to 0.20-0.24 during the 1990s. However, there were some indications of convergence between rich and middle-income states. Bhattacharya and Sakthivel (2004) observed widening disparities among the major Indian states during the 1990s, and highlighted that population growth made it worse for the poorer states. The coefficient of variation in terms of per capita income worsened from 0.22 in the 1980s to 0.43 in the 1990s. Ghosh (2008) observed that disparities in income across Indian states began rising after the limited economic reforms of the 1980s, and that the estimated results on convergence revealed significant divergences during 1992-2002.

Interestingly, a recent study has observed that the average growth in per capita income across major states doubled from 2.8% during 1993-2001 to 5.8% during 2001-09, all in the post-reform period. It highlighted that the hitherto backward states

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of Bihar, Chhattisgarh, Odisha and Uttarakhand had recorded their strongest economic performance in the second period (Kumar and Subramanian 2012).

It may be noted that regional political parties have gained widespread prominence on India's political landscape in the post-reform period. The Telugu Desam Party (TDP) in Andhra Pradesh;<sup>3</sup> the Asom Gana Parishad (AGP) in Assam; the Rashtriya Janata Dal (RJD), Lok Janshakti Party (LJP) and Janata Dal (United) (JD(U)) in Bihar; the Shiv Sena in Maharashtra; the Akali Dal in Punjab; the Biju Janata Dal (BJD) in Odisha; the All India Anna Dravida Munnetra Kazhagam (AIADMK), Dravida Munnetra Kazhagam (DMK), and Paattali Makkal Katchi (PMK) in Tamil Nadu; and the Samajwadi Party (SP) and Bahujan Samaj Party (BSP) in Uttar Pradesh have been in the limelight for some time. More recently, the Telangana Rashtra Samithi (TRS) in Andhra Pradesh, the Maharashtra Navnirman Sena (MNS) in Maharashtra, and the Trinamool Congress (TMC) in West Bengal have been added to the list of regional outfits. This has meant increasing regionalisation of politics in the country, and local issues driving politics at the state level. There has been a demand from poor states such as Bihar and Odisha that they be given a "special category" status to become eligible for more central financial assistance. As noted by Ahluwalia (2000), with the central government intervening less in key economic areas in the post-reform period, state-level performances and policies deserve much closer attention. Thus, issues related to interstate disparity in economic growth are more relevant now than before.

Against this backdrop, this study attempts to review Odisha's relative economic position in the post-reform period. The state has for long been stamped with the tag of being one of the poorest in India. In addition to using secondary data from official sources such as the Central Statistics Office (CSO), the Reserve Bank of India (RBI), and the Government of Odisha, we also conducted a household survey in select districts of the state to gain a deeper insight into the situation at the grass-roots level.

The organisation of the paper is as follows. Section 2 reviews the economic position of Odisha compared to the other major states in India. Section 3 outlines the design of the household survey undertaken by the study, and its broad findings are summarised in Section 4. Finally, Section 5 concludes by mentioning the policy implications of the findings.

## 2 Interstate Disparity and Odisha's Performance

In the literature on interstate disparity, states are generally compared in terms of their per capita income to distinguish between rich, poor and middle-income states. The nature of the distribution of states on the basis of this, and their transition from one category to another provide useful information on interstate disparity over time.

In this study, we use the per capita net state domestic product (NSDP) of the 16 major states in India to rank them in ascending order, with the poorest state (with the lowest per capita NSDP) being assigned Rank 1, and the richest state being assigned Rank 16.<sup>4</sup> We have adopted the same methodology as

Dandekar (1993), and the relative ranks of the major states in the post-reform period are in Table 1. The rank for each state is the average of the ranks assigned to that state in 1994-95, 1999-2000, 2004-05, and 2009-10. Table 1 also has the ranks of the states in the pre-reform period, based on Dandekar (1993).

**Table 1: State-wise Ranks in Relative Per Capita Net State Domestic Product**

State	Pre-Reform Period	Post-Reform Period	Change
Andhra Pradesh	7.0	7.8	Improvement
Assam	5.8	4.0	Deterioration
Bihar	1.0	1.0	Deterioration
Gujarat	13.0	12.3	Deterioration
Haryana	13.5	15.0	Improvement
Himachal Pradesh	11.7	11.5	Deterioration
Karnataka	9.5	9.0	Deterioration
Kerala	7.0	11.5	Improvement
Madhya Pradesh	2.8	4.0	Improvement
Maharashtra	14.3	15.0	Improvement
Odisha	3.0	4.0	Improvement
Punjab	15.3	14.3	Deterioration
Rajasthan	6.5	6.0	Deterioration
Tamil Nadu	9.0	11.5	Improvement
Uttar Pradesh	4.3	2.3	Deterioration
West Bengal	11.5	7.0	Deterioration

The average rank for the pre-reform period is based on Dandekar (1993).

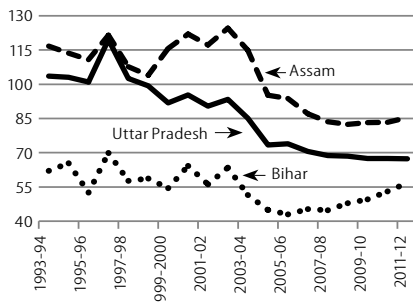
Table 1 shows the variations in the ranking of states in the pre- and post-reform periods. The two states that show significant changes in ranking are Kerala and West Bengal, with the former substantially improving its relative position in the post-reform period, and the latter significantly deteriorating. Most importantly, the richer states of the pre-reform period – Gujarat, Haryana, Maharashtra and Punjab – continued to be rich in the post-reform period, while the poorer states – Bihar, Odisha and Uttar Pradesh – remained poor.

The aim of this study is to review the relative economic position of Odisha in the post-reform period, and to assess if faster growth (Kumar and Subramanian 2012) in the last decade contributed to any change. We shall begin by comparing Odisha's economic position with that of other major states by using per capita NSDP as a proxy for overall standard of living. But given the limitations of per capita NSDP in measuring overall development, we supplement our analysis using key socio-economic indicators.

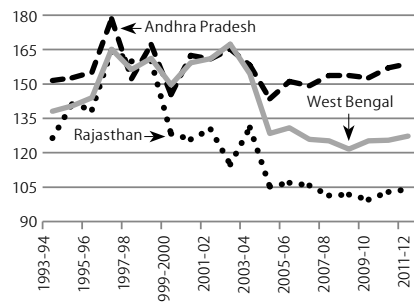
Odisha's comparative position marginally improved after the economic reforms began. It moved from being the third poorest state in the pre-reform period to the fourth poorest state in the post-reform period. However, in the post-reform period, our estimations show that Odisha's rank gradually improved from being the second poorest among the 16 major states in 1994-95 to the fifth poorest in 2004-05, and the sixth poorest in 2009-10.

A state-wise comparison was also undertaken by calculating the percentage of per capita NSDP of nine major states to that of Odisha for the post-reform period. For this, three states each were selected from the poor (Assam, Bihar and Uttar Pradesh), middle-income (Andhra Pradesh, Rajasthan and West Bengal), and rich (Gujarat, Haryana and Punjab) categories.<sup>5</sup> The percentage of per capita NSDP of the states was calculated for

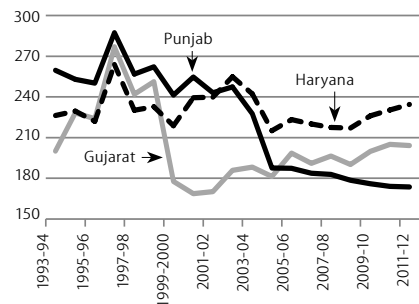
**Figure 1A: Relative to Poor States**



**Figure 1B: Relative to Middle-Income States**



**Figure 1C: Relative to Rich States**



1993-94 to 2011-12, and they are plotted in Figures 1A to 1C.<sup>6</sup> A percentage value of less than 100 implies Odisha's position is better relative to that of the referred state, while a value of more than 100 indicates its position is poorer.

It can be observed that Odisha's performance has been improving compared to the other weak states in the group (Figure 1A). The per capita NSDPs of Assam, Bihar and Uttar Pradesh as a percentage of the per capita NSDP of Odisha were lower during 2004-12, compared to 1993-2004. Assam, which was richer compared to Odisha during 1993-2004, became poorer during 2004-12.

Compared to the middle-income states, the situation is similar (Figure 1B). Relative to Rajasthan and West Bengal, Odisha significantly improved its position after 2003-04, but relative to Andhra Pradesh, its position remained largely unchanged. In recent years, its position has been very similar to that of Rajasthan (close to 100%).

It can also be observed from Figure 1c that Odisha has largely improved its position compared to the rich states. Compared to Gujarat, a significant improvement in Odisha's relative economic position was seen after 1999-2000, but it later lost some of the gain. Relative to Punjab, Odisha exhibited distinct improvement after 2004-05, but its relative position was unchanged compared to Haryana's.

To summarise, Odisha's relative economic position has improved compared to other states since 2004-05. Notwithstanding this, its per capita income still continues to be nearly half that of the rich states in our sample.

Not confining ourselves to per capita income (NSDP) as a proxy to assess the overall economic position or standard of living and using additional information from various socio-economic indicators make for a broader and more comprehensive analysis. We have compared Odisha's life expectancy at birth, infant mortality rate (IMR), literacy rate, and distribution of consumption with those at the all-India level to gain a comparative

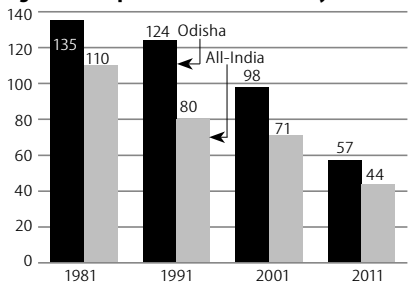
perspective. We limit ourselves to an all-India comparison to save space and keep our analysis simple.

Life expectancy at birth is a good summary measure to assess socio-economic development because it reflects a combination of attributes such as access to nutritious food, health facilities, and education, adequate income, and satisfactory environmental standards. During 1993-97, life expectancy in years at birth in Odisha was 57.2 compared to 61.1 at the all-India level. For 2006-10, the corresponding figures were 63 and 66.1, respectively. This signifies that the improvement in life expectancy in Odisha was marginally better than at the all-India average. As for the IMR, another summary measure, Odisha's relative position has continuously improved, while the difference with the national average has narrowed (Figure 2). The literacy rates of Odisha tend to be very close to national-level figures (Figure 3). Consumption distribution has been more egalitarian in Odisha compared to the all-India trend. This is reflected in the Gini coefficient of distribution of consumption for 2004-05 over 1993-94 (Figure 4).

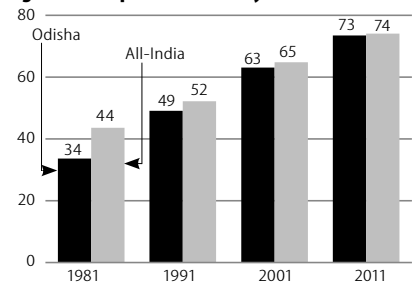
The analysis suggests that despite lagging behind the national average in several socio-economic indicators, Odisha has done better in the last decade. The use of socio-economic indicators supports our conclusion based on per capita NSDP that Odisha's relative economic position and standard of living improved in the last decade. It continues to remain poor compared to the 16 major states in terms of per capita NSDP, but it moved up from being the second poorest state in 1994-95 to the sixth poorest in 2009-10. During 2004-12, Odisha improved its relative position compared to all categories of states. In that sense, Odisha did become less poor in the last decade.

It is generally alleged that macro data at the state level do not reflect socio-economic realities at the grass-roots level, and some commentators have expressed apprehensions about data collection and compilation issues, particularly in rural areas. While keeping this in mind, we carried out a household survey

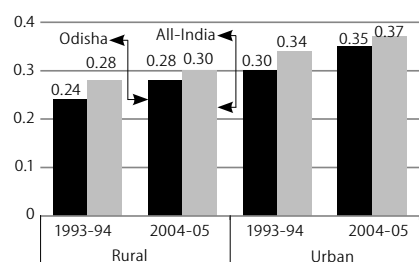
**Figure 2: Comparative Infant Mortality Rates**



**Figure 3: Comparative Literacy Rates**



**Figure 4: Gini Coefficient of Consumption Distribution**



to gain some understanding of the economic progress in rural Odisha and its dynamics.

### 3 Sample Design and Profile

The study designed a multistage sampling technique for collecting field-level data from rural Odisha. In the first stage, three districts in three different income categories were identified on the basis of per capita net district domestic product (NDDP) – Kendujhar (rich), Jajapur (middle-income), and Balangir (poor). The per capita NDDP of these districts were 188%, 103%, and 84% of the state average in 2008-09, respectively. These districts also represent diverse regions in the state – coastal (Jajapur), western (Balangir), and northern (Kendujhar) – and various economic activities – industry (Jajapur), agriculture (Balangir), and mining (Kendujhar).

In the second stage, five villages were chosen from the three sample districts, mainly on the basis of accessibility and facilities to conduct a household survey. The sample villages chosen were Khuntasamalai (Balangir district), Matha and Chhenapadi (Kendujhar), and Naupala (Jajapur).

In the third stage, households were drawn from the sample villages by applying simple random sampling methods. For ensuring accuracy of the information provided by the sample households, care was taken to cross-check it with information from neighbours, *gauntias* (village headmen), and the investigator's own acquaintances. Personal interviews were conducted through a door-to-door survey during December 2011-January 2012. The authors themselves collected information from the respondents to ensure it was current and accurate.

A summary of our sample districts and villages is in the Appendix (p 67). Most of the households were engaged in the primary sector. Physical infrastructure, such as roads and irrigation facilities, was good in two of the sample districts, while there were deficiencies in the third. Despite electrification, the actual supply of electricity was not regular. All three districts had basic schooling facilities and a health centre. However, the poor quality of schooling and poverty-related compulsions to work prevented the vast majority from pursuing higher studies. Our sample households constituted one-fifth to one-fourth of the total number of households in the sample villages.

### 4 Survey Results and Empirical Evidences

The information collected from the sample households covered two broad areas – one, on their economic position as reflected in household assets, and two, on socio-economic indicators such as the demographic/educational/occupational profiles of the sample households.

Although we collected information on family income, it could not be reasonably verified as the majority of sample households were engaged in agriculture, and a large part of the produce was for self-consumption. While households engaged as wage labourers or migrant workers, and those self-employed in weaving, diary, carpentry, and so on, received monetary remuneration, we suspect that the information on family income provided by them was inaccurate, both because of the absence of any records and misreporting. On the

contrary, we believe the information provided by the households on having various physical/financial assets such as land, automobiles/cycles, consumer durables such as TVs/fridges, livestock, mobile phones, houses, and bank deposits and insurance products is reasonably accurate. People tend to remember such purchases, and the information is easily verifiable.

For assessing the economic position of the sample households, we relied on information on various physical and financial assets, as provided in Table 2. It may be observed that Matha and Chhenapadi villages stand out on most indicators. Nearly half their households acquired automobiles, 78% purchased or constructed houses, 82% purchased consumer durables, and almost each household had a telephone or mobile phone. More than four-fifths of sample households were found to have bank accounts and insurance products. But only a meagre 3% had taken bank loans. Overall, the acquisition of such assets by the majority of sample households suggested that the standard of living of a majority of the people in them had improved. There has been significant progress in financial inclusion in terms of bank deposits and insurance products, but it has been miserable in terms of bank loans.

**Table 2: Acquisition of Assets by Sample Households (in %)**

Item ↓ / Sample Area →	Khuntasamalai	Matha and Chhenapadi	Naupala
Per capita income (Rs)	27,559	18,149	11,673
Purchase of automobile/cycle	13.9/57.4	50/56	38/74
Holding bank deposit account	41.6	82	34
Availed loans from banks	26.7	3	10
Purchased insurance products	11.9	84	36
Purchased land	12.9	58	10
Purchased/constructed house	22.8	78	38
Purchased consumer durables	47.5	82	74
Purchased livestock	69.3	86	40
Purchased mobiles	64.4	94	88

The standard of living improved the least in Khuntasamalai. Just 13.9% of the sample households purchased an automobile, and 22.8% purchased/constructed a house. However, 26.7% of the households had taken bank loans, mainly those engaged in dairy farming and weaving. It may be observed from Table 2 that the standard of living in Naupala village was somewhere between Matha and Chhenapadi, and Khuntasamalai. The relative positions of the sample regions were consistent with the average per capita NDDP of the districts.

It is important to note that by segregating the acquisition of assets by the sample households into those bought during 1992-2000 and during 2001-11, it was seen that more than 70% of automobiles, houses, consumer durables, and livestock were acquired in the latter period in all the three sample areas. Similarly, 87% of the bank deposits in Matha and Chhenapadi villages, and more than two-thirds of them in the other two sample villages were opened during 2001-11.

The differences in the economic position of the sample households were consistent with the nature of major economic activity in their neighbourhood, their physical infrastructure, and their occupational profile, as seen in Table 3 (p 66).

Matha and Chhenapadi, where the standard of living was found to have improved the most, are close to where mining

activities take place. Nearly three-fourths of the sample households were engaged in agriculture and as wage labourers (Table 3). A majority of the wage labourers worked in mining, and ancillary activities. We observed that the wages paid to these workers were much higher compared to that paid to agricultural labourers in other two sample villages. Moreover, with good irrigation facilities, those engaged in agricultural activities were also well off.

**Table 3: Demographic, Educational, and Occupational Information** (in %)

Item ↓ / Sample Area →	Khuntasamalai	Matha and Chhenapadi	Naupala
<b>Demographic</b>			
Dependency ratio*	1.6	3.7	2.4
Earning members to members in the age group of 15-60 years in a family	64.1	45.7	49.1
Female earning members in all earning members in a family	16.7	0.9	1.9
<b>Educational</b>			
Illiterate	7.9	20	Nil
Above secondary education	53.5	18	32
Technical/professional	Nil	Nil	2
<b>Main occupation**</b>			
Agriculture	1	40	36
Wage labour	31.7	36	10
Of which migrant labourers are	19.8	4	Nil
Small traders	7.9	10	24
Self employed***	56.4	8	14
Others	3.0	6	16

\* Number of dependents to earning members in a family; \*\* Most of the households engaged in small trade, business, working in government/private permanent jobs, or in wage labour also undertake agricultural farming; \*\*\* All the above are occasionally engaged in weaving, dairy farming, carpentry, tailoring, and so on.

On the contrary, in Khuntasamalai, where the standard of living improved the least, irrigation facilities were poor and there was no vibrant economic activity in the neighbourhood, such as industry or mining. Most of the sample households were engaged as wage labourers, weavers, tailors, and carpenters (Table 3). The earnings of the majority were at near-subsistence level. Close to one-fifth of the wage labourers were migrants who could not be gainfully employed in the village or its vicinity.

In Naupala village, a majority of the sample households were engaged in agriculture and small trade. During our discussions with respondents, we learnt that the availability of irrigation facilities helped agriculture, and better road connectivity had made small trading possible.

Interestingly, the demographic and educational information obtained were not in sync with the relative economic positions of the sample areas. For example, the dependency ratio was highest at 3.7 in Matha and Chhenapadi, while it was lowest at 1.6 in Khuntasamalai (Table 3). The proportion of earning members in the age group of 15-60 was also lowest in Matha and Chhenapadi at 45.7%, with almost no females engaged in gainful employment. On the contrary, the proportion of earning members in the age group of 15-60 was found to be the highest in Khuntasamalai at 64.1%, and 16.7% of them were female.

This is intriguing. Despite a large proportion of working members, Khuntasamalai's economic position is the worst among the three sample areas. Why is this so despite more of its family members working? And do the majority of family members in Matha and Chhenapadi have the comfort of not working because of their

relative economic affluence? From discussions with the sample households, we understood that relatively better incomes combined with conservative sociocultural customs served to restrict females to household activities in Matha and Chhenapadi, and Naupal. On the other hand, many economic activities in Khuntasamalai such as dairy farming and weaving were within households, facilitating the participation of female members. Migrant workers, constituting close to one-fifth of the wage labourers in Khuntasamalai, generally move around with families and their female members were often gainfully employed. An important finding is that more employment does not necessarily translate into a better standard of living. Rather, what is important is the type of activities in which households are engaged. Ensuring better physical infrastructure and setting up more productive economic activities, such as mining and industry, can be helpful in generating more earning and improving living standards.

We also observed that a majority of the sample households (53.5%) in Khuntasamalai had members with more than secondary education, while less than one-fifth in Matha and Chhenapadi had progressed so far. Naupal village was somewhere in the middle on this. The proportion of sample households with at least one literate family member was 7.9% in Khuntasamalai, compared to 20% in Matha and Chhenapadi. Another key observation is that despite its relatively weak economic position, Khuntasamalai provided better education to family members than the other two sample villages. However, acquiring an educational degree did not facilitate better earnings and could not improve the standard of living.

## 5 Summary and Conclusions

It has been widely recognised that India's achievements in macroeconomic performance in the post-reform period have been impressive. Before the current economic slowdown and high inflation, India had achieved high economic growth, price stability, and better integration with the global economy, both in terms of trade and investments. However, a criticism of the post-reform period has been that all states did not equally benefit from the process of growth.

It is encouraging to observe that Odisha has gradually improved its relative position. It is also seen that compared to the other major states comprising the rich, poor and middle-income categories, Odisha has improved its relative per capita income in recent years. Various socio-economic indicators such as the life expectancy at birth, IMR, and distribution of consumption also support relatively better progress in Odisha compared to the all-India average.

A household survey in select districts of Odisha independently assessed changing economic conditions in rural areas. The survey results indicated some improvement in the standard of living, with the acquisition of various physical and financial assets, such as automobiles, consumer durables, houses, bank deposits, and so on. It was also observed that around 70% of the assets were acquired during 2001-11, compared to 30% during 1992-2000. This confirms that most of the improvement in living standards took place in the second half of the post-reform period.

Information gathered from the sample survey also revealed that despite access to basic education and health services, the scope for higher education was very limited for the vast majority of sample households. Social customs and the lack of opportunity prevented female family members from being gainfully employed. Areas endowed with good irrigation facilities, road connectivity, and proximity to more productive economic activities, such as mining and industry, fared better.

To further improve Odisha's relative position and rescue a large number of its population from poverty, sincere and concerted policy efforts are necessary on multiple fronts. As large parts of the population are dependent on agriculture, the need for significant improvement in irrigation cannot be overemphasised. Learning from the experiences of Punjab and Andhra Pradesh in contract farming, commercial agriculture could be encouraged. With the emergence of the services sector as the main driver of economic growth, the necessary enabling conditions have to be created so that the youth can benefit from it. Participation in vibrant service sectors, such as information

technology (IT) and IT-enabled services (ITES), banking and finance, and hotels and tourism, needs the creation of capacity through professional and technical education.

Most importantly, one needs to draw lessons from Acemoglu and Robinson (2012) on the role of inclusive political and economic institutions for achieving sustainable economic progress for all. These institutions strive to ensure equal opportunities to all to pursue economic activities suited to their interests and capabilities. When one works in an occupation one is interested in, and paid according to one's productivity, it is possible to move up vertically. There will naturally be adequate motivation to work, and also the scope to innovate. Such institutions empower various sections of society, thus enhancing plurality. Providing quality education, health facilities, infrastructure, and good governance to all are the basic ingredients of building inclusive institutions. The public, and the Government of Odisha as its representative, should focus on these issues rather than on the political and emotive issue of the demand for a special status.

#### NOTES

- 1 Estimated by the Tendulkar Committee method, as reported in *Economic Survey, 2012-13*.
- 2 Among the major states, the ratio of per capita GDP between the richest and poorest has increased from less than three in the early 1980s to a little over four in recent years.
- 3 Andhra Pradesh was recently bifurcated into the states of Andhra Pradesh and Telangana.
- 4 We have included the same states considered by Dandekar (1993). However, Bihar, Madhya Pradesh (MP) and Uttar Pradesh (UP) have since been bifurcated. Our data for them do not include the newly formed states. The ranking of the states in 1994-95, 1999-2000, 2004-05 and 2009-10 was done by applying Dandekar's method. The average ranking of the states based on the four years constitute their ranking for the post-reform period.
- 5 Categorising the states into poor, middle-income,

and rich is based on their ranking in the post reform period, as seen in Table 1.

- 6 Data on per capita NSDP for the respective states were obtained from *Handbook of Statistics on Indian Economy, 2011-12*. Data for 1993-99 refer to the base year 1993-94, those for 1999-2004 refer to the base year 1999-2000 and for 2004-12 refer to the base year 2004-05. As data for all the states pertain to the same base year, taking the ratio for different periods does not pose any serious problem.

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#### Appendix Table: Profile of Sample Areas

Item ↓ / Sample Area →	Khuntasamalai	Matha and Chhenapadi	Naupala
District	Balangir	Kendujhar	Jajapur
Total households	396	218	179
Sample households	101	50	50
Major occupation	Majority are self-employed in addition to traditional farming. One-fifth of sample households are seasonal migrant workers (December-July). Around 3% of households are in government jobs.	Majority of the sample households are engaged in agriculture, and work in mining. A sizeable number of immigrant labourers work in mines and stone crushing.	Farmers and a sizeable number employed in small trade and the IT sector.
Physical infrastructure	(i) Connected to nearest state highway by a kuchha road, but river has no bridge. Cemented roads in village are not in a good condition. (ii) Electrified in 1979, but not the part with a majority of ST households. (iii) A small irrigation canal exists since 1991, but water is not available due to improper maintenance.	(i) Connected to nearest block HQ and Bhadrak town by pucca road. Cemented road in village. (ii) Only a couple of households had electricity initially, but a majority have had it since the late 1990s. (iii) Good irrigation facilities from the nearby Hadgarh dam.	(i) Connected to NH5 which is 5 km away by both pucca and kuchha roads. Cemented road in village. (ii) Electrified in 1980s, but power is available only for four or five hours a day. (iii) An irrigation canal reduces the dependence of agriculture on the monsoon.
Facility for education	Primary, upper primary, and high schools. Anganwadi established in 1990. Quality of education is poor, and poor economic conditions do not encourage many to take up higher studies.	Primary and middle schools in both villages, as well as an anganwadi.	Primary school in the village since 1982, but higher schooling facilities are in a nearby village 2 km away.
Facility for health services	Largely dependent on village quack and accredited social health activists under the National Rural Health Mission. Nearest primary health centre is 5 km away.	A well-furnished healthcare centre 1.5 km away from both villages.	Health facility established under the NRHM is 2 km away from the village.