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Abstract

This chapter reveals a very interesting development-disparity landscape in India, where authors have compared some broad development indicators between the two contrasting regions of India, viz., the “Red Corridor” region and its complement. While clustering these regions, they have gone beyond the state boundary and have taken districts, which are affected by the rising trend of left-wing extremism and have experienced unrest and conflict for a persistent period of time. Such cluster of districts is being compared with another, which is free from such violence. This distinction has been made to explore the difference in the degree of underdevelopment of the “Red Corridor” region of India vis-à-vis the rest of India (ROI). The popular notion based on mostly anecdotal evidence says that the “Red Corridor” region consists of most backward areas, where socioeconomic development has been abysmal since independence. Such a situation is a reflection of prolonged feudal structure and exploitation of the natural resources of the powerful groups and marginalizing various indigenous communities. As a result, the extremists have been able to win the confidence of the deprived sections of the population living here and have organized them to revolt against the state. Such anecdotal evidence lacks statistical rigour, which clearly can justify such development disparity. This chapter, therefore, fills the gap in the existing literature by statistically analysing average outcomes of some key dimensions of development: access to health facilities, education, finance of the “Red Corridor” region vis-à-vis other parts of India, where such extremism is absent. The results stunningly reflect that the “Red Corridor” region is indeed impoverished and poor compared to the ROI in terms of average outcomes of the aforementioned development dimensions. Such detailed empirical analyses are helpful for the policy recommendation process and endorsing the need for voice representation to ensure justice and also to bridge the gaps between these two very contrasting regions in India.

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Chapter 5
Miseries of the Red Corridor Region of India: What Do the Data Tell Us?

Jyoti Prasad Mukhopadhyay and Nilanjan Banik

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5.1 Policy Challenge for India's Red Corridor Region

Of late, India has experienced an upsurge in left-wing extremism (LWE) and related insurgency in the Red Corridor region[1] of India. The extremists popularly known as Maoists have consolidated their strength in different districts of the states through guerrilla warfare against the security forces. Landmine blasts and ambush killings of central and paramilitary personnel have become frequent news headlines in national dailies. In retaliation, the states have also launched "Operation Green Hunt", a "security-centric" programme, to curb Maoist attacks either by killing or by arresting Maoist leaders and their comrades. Many innocent lives have been lost in this bloody battle between the states and the extremists. Social researchers view this rise of LWE in India as an outcome of development policy failures.

In fact, in recent times, much of the development policy debates in India are centred on issues relating to unequal income distribution (Tendulkar 2010; Banik 2009), socio-demographic disparity (Kurian 2000), poverty (Purfield 2006), institutions (Kochar et al. 2006), and deprivation (Debroy 2003). Each of these issues has received considerable media (both print and electronic) attention under the garb of Naxalism[2], inclusive growth and corruption. Tendulkar (2010) admits that during

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[1] The Red Corridor is a region comprising parts of Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and West Bengal with considerable Naxalite activities.

[2] Naxalism is a social movement which mobilizes landless labourers and displaced tribals into cadres with the aim of overthrowing the Indian state and supplanting it with a stateless and classless society through armed revolution. We consider the two terms "Naxalism" and "Maoism" as synonymous and hence use them interchangeably in this chapter.

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the 11th five-year plan (2007–2012) there has been a rise in summary measures of relative inequality (Gini coefficients), especially in the urban areas. Nilanjan Banik while identifying types of inequalities, and reasons for their existence, also draws a distinction between equity and equality[3] (Banik 2009). Measuring disparities in terms of sex ratio (females per 1000 males), female literacy, infant mortality and the level of infrastructure development, J. N. Kurian finds evidence of widening regional disparities in India (Kurian 2000). In a similar vein, C. Purfield conducts a state-level analysis and finds that the richer states have been more successful in terms of reducing poverty, and capital flow (alongside with job creation), in comparison to the poorer states (Purfield 2006). Kochar et al. find that states with weaker institutions and poorer infrastructure experienced lower gross domestic product (GDP), and lower industrial growth (Kochar et al. 2006). At a subregional (district) level, B. Debroy and Bhandari identify the most backward districts benchmarking them on the attainment of Millennium Development Goals (set by United Nations Development Programme—UNDP) across six measures of socioeconomic progress: poverty, hunger, literacy, immunization, infant mortality and elementary enrolment. They find that India's worst districts are located in Bihar, UP, Jharkhand, Odisha, Madhya Pradesh, Assam, Maharashtra, West Bengal and Chhattisgarh, with a few districts from Arunachal Pradesh, Karnataka and Tamil Nadu thrown in (Debroy 2003).

The upshot of this brief literature review is that pockets of deprivation exist. The market is still not perfect,[4] and there are ways to increase overall productivity through making the market work for the poor and deprived. Imperfection in labour[5] and capital market affects[6] distribution of income. Imperfection in the goods market thwarts opportunity to earn income. Imperfection in the judicial system means that the deprived do not enjoy any legal right(s), leading to exploitation and discrimination. Although economists and policymakers, in general, are worried about individual well-being, and the factors affecting this well-being, they somehow seem to assume the market is perfect (better known as classical assumption). All the growth models, namely, the Solow growth model, endogenous growth models (Romer 1990; Mankiw et al. 1992), etc., have tried to explain higher standard of living (read, per capita income) without explicitly accounting for market imperfection. In fact, the fundamental assumption for these growth models to work is to assume that the capital market is perfect—so that whatever is saved can be invested for productive purposes. Development economists have looked at other factors, such

[3] Equality is aligned with positive economics, providing evidence about income distribution (through Gini coefficient) without commenting about what should have been an ideal income distribution. Equity, on the other hand, is based on value judgment and argues what should have been an ideal income distribution.

[4] The market is perfect when providers of goods and services are able to participate, and get returns according to the value of marginal product. There are no entry barriers, and factors of production operate under perfectly competitive setting.

[5] The labour market is not perfect because of discrimination and reservation on the basis of caste, religion and gender.

[6] Under perfect capital market conditions, anyone with profitable investment opportunity will be able to either borrow money to finance it or sell equity in a firm set up to undertake it.

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as better access to health and education—not otherwise considered in the growth models—as indicators of well-being. They also do not explicitly focus on market imperfection.

Keeping in mind these theoretical limitations, we provide evidence that the poor suffer from market imperfection. Often markets do not exist, and it is the responsibility of the government (both at the Centre and in the states) to provide public goods to help the poor participate in the market. However, since there is no user charge for using public goods, it is the quality and the delivery mechanism of these public goods which make the difference. Poor quality (of roads, electricity supply, etc.) and an inefficient delivery system of services, such as education and health care, make it costlier for the poor to participate in the market. In addition, inefficient and corrupt bureaucracies raise transaction costs in the asset market (such as land), important for the poor.

Thus, it is the socially and economically deprived group of people who takes up arms against the State in the name of Naxalism. The expert group appointed by the Planning Commission in its report (2008) described Naxalism "as a political movement with a strong base among the landless and poor peasantry and *adivasis*. Its emergence and growth needs to be contextualised in the social conditions and experience of people who form a part of it. The huge gap between state policy and performance is a feature of these conditions. Though its professed long-term ideology is capturing State power by force, in its day-to-day manifestation it is to be looked upon as basically a fight for social justice, equality, protection and local development".[7]

This chapter focuses on Naxalism, and the reasons for its persistence and spread from the point of view of socioeconomic deprivation based on secondary information. It does not attempt to capture any historical and sociological discourse to understand such antistate activities. One popular notion in India is that the Red Corridor region is one of the most backward regions of India. Socioeconomic development of the region has been abysmal since independence. As a result, the Maoists have been able to win the confidence of the deprived sections of the population living here, and have organised them to revolt against the government. A careful review of the existing body of literature reveals that the popular notion of underdevelopment mentioned previously is based mostly on anecdotal evidence. To the best of our knowledge, no rigorous study has been done to explore underdevelopment of the Red Corridor region vis-à-vis the rest of India (ROI) where Maoism has not proliferated. The objective of this study is to fill this gap in the literature. This study is completely based on secondary data, and hence other reasons often cited by social researchers such as oppression of various marginalized groups like the tribals and *dalits* by the State, human rights violations, political marginalization, etc. are clearly outside the purview of our study.

We examine deprivation in terms of seven development indicators, namely, access to health and health outcomes, access to education and educational outcomes,

[7] "Development Challenges in Extremist Affected Areas—Report of an Expert Group", 2008. Expert Group was constituted by Planning Commission, GOI, pp. 59–60, at http://planningcommission.nic.in/reports/publications/rep_dce.pdf. Accessed 30 Jan 2012.

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access to finance, access to communication and other basic amenities such as nature of work participation, the living standard and poverty. Our results show that the Red Corridor region is indeed impoverished in comparison to the ROI in terms of most of the indicators of well-being considered in this chapter. The rest of the chapter is organised as follows: Section 5.2 focuses on macro-level factors (such as income inequality) which might have been responsible for the genesis of Naxalism in the Red Corridor region. Section 5.3 focuses on some micro-level factors such as deprivation in terms of standard development indicators. Section 5.4 presents the methodology and results. Section 5.5 discusses government interventions to combat Naxalism. Section 5.6 concludes with the summary and future policy direction.

5.2 Unequal Income Distribution

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According to Subramanian (2005), "[N]axalism is essentially an expression of the people's aspiration to a life of dignity and self-respect." Much of the self-respect and dignity is lost due to limited opportunity to earn income. A popular perception is that the root cause for the rise of Naxalism in India is unequal income distribution. If we consider the period before and after reforms, a pertinent question is whether the people are more deprived now than they were before. This question arises because of recent spurt in Naxalite activities for the period after reforms.[8] Although there were a few reforms initiated during the early 1980s, the all-encompassing process of reforms started in 1991.[9]

It is to be noted that during the seventh five-year plan (1985–1989), India's annual growth rate of gross domestic product (GDP) was around 5.5%. During the eighth five-year plan (1992–1996), the GDP growth rate has increased to 6.5%, and, during the tenth five-year plan (2002–2006), the GDP growth rate has further increased to 7.7% (Central Statistical Organization, Government of India). This higher growth rate resulted in higher per capita income and lower poverty numbers. India's per capita GDP, measured in terms of constant US dollar rates of 2005, increased from US$ 215 during 1975 to US$ 293 during 1988, and further to US$ 1140 during 2009 (World Development Indicators 2012). Likewise, the poverty number (measured in terms of headcount ratio, HCR)[10] declined from 36% in 1993–1994 to 27.5% in 2004–2005.[11] Measured by these numbers, broad-based

[8] In March 2012, Maoists abducted two foreign nationals in Odisha. In the very next month, in Chhattisgarh, they abducted a district collector. In both the cases, the abducted victims were later released unhurt after some of the demands made by the Maoists were met.

[9] Reforms mean policies adopted by the Central Government to promote globalization and liberalization.

[10] Headcount ratio (HCR) is measured as a proportion of the population living below the poverty line. India's official poverty lines in 1993–1994 were ₹ 205.84 and ₹ 281.33 for rural and urban India, respectively. In 2004–2005, poverty lines were ₹ 356.30 and ₹ 538.60 for rural and urban India, respectively.

[11] Ministry of Rural Development, Government of India.

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economic reforms have increased overall economic well-being. How then can we explain social unrest at a time of high income growth? Or, more specifically, why is there a spurt in Maoist activities in spite of India witnessing a higher growth?

The answer to this apparent puzzle lies in examining the impact of reforms on income distribution. Reforms entail unequal payoffs to economic agents. People with higher skills stand to gain more compared to those with lower skill sets (read, less productive people). This has resulted in more skewed income distribution leading to social unrest. Box 1 briefly discusses the genesis and evolution of the Maoist movement in India.

Looking at the share of sectoral GDP, we find that the share of agriculture in national income has fallen from 56.90% during 1950–1951 to 14.6% during 2009–2010. On the other hand, the share of the services sector in national income has increased from 29.80% during 1950–1951 to 57.2% during 2009–2010. The share of the manufacturing sector has remained more or less constant at around 27% after 1992. While looking at the number of people who are earning their livelihood from these three sectors, it can be seen that around 57% of the Indian population earns their livelihood from agricultural and agriculture-related allied activities, compared to less than 10% of the population earning their livelihood from the organized services sector. The rest of the people are working in the manufacturing sector. What does it mean? In simple words, if the national income (GDP) is ₹ 100, then agricultural and allied activities are contributing 14.6% of the national income, that is, ₹ 14.6, in comparison to ₹ 57.2 generated by the services sector. Income inequality becomes evident as it is like distributing ₹ 14.6 to around 57 people, as compared to distributing ₹ 57.2 to less than 10 people. What is more worrying is that this inequality is going to rise rapidly. Going by 2009–2010 data, the agricultural sector is growing at an annual rate of 1.7% in comparison to services growing at a rate of 8.7%. If this trend continues, then the share of agriculture in national income is going to become a single digit number within the next 15 years—contributing more to inequality in income distribution.

Also, the share of income generated by the agricultural sector is more volatile (measured by the variance of the growth rates) in comparison to manufacturing, services and overall GDP. Looking at the coefficient of variation[12] (CV), we find that it is the highest for the agricultural sector in comparison to industry and services (see Table 5.1). Moreover, uncertainty of agricultural income makes things even worse. Uncertainties associated with income have two specific outcomes: postponement of investment decisions and migration. Postponement of investment decisions has a bearing on future income, and reduces future expected earnings. Besides, uncertainty associated with volatile income causes migration. As "expected", return in the urban sector (dominated by the services sector) is higher than the "actual" return in the agricultural sector, poor landless agricultural workers often resort to migration for finding employment and livelihood opportunities. However, a majority of the migrant labourers lack adequate skills to get meaningful employment in the organized service sector. Consequently, these unemployed people contribute to

[12] CV = (standard deviation/mean) × 100.

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Table 5.1 Sectoral growth rates and other related statistics. (Source: Central Statistical Organization and author's own calculation)

	1971–1972 to 1980–1981	1981–1982 to 1990–1991	2004–2005 to 2009–2010
GDP			
Growth rate (mean)	3.16	5.64	8.3
Coefficient of variation (CV)	137.75	39.05	27.14
Agriculture and Allied Service			
Growth rate (mean)	1.83	3.55	2.99
Coefficient of variation (CV)	475.21	150.74	162.74
Industry			
Growth rate (mean)	4.05	7.11	8.67
Coefficient of variation (CV)	88.91	28.22	41.85
Services			
Growth rate (mean)	4.42	6.72	10.05
Coefficient of variation (CV)	34.03	17.16	19.05

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skewed income distribution. As bulk of the tribals and *adivasis* are primarily dependent on agriculture and allied activities, and for those who have migrated to urban areas are less skilled and typically get absorbed in the urban unorganized sector, it is no wonder why they are the ones who are left at the bottom of income distribution.

Box 1: A Brief History and Recent Account of Maoist Movement in India

The Naxalite movement takes its name from a peasant uprising which took place in May 1967 at Naxalbari, a village on the northeastern tip of India, situated near the town of Siliguri in the state of West Bengal. The genesis of Naxalism in India can be traced back to the formation of the Communist Party of India-Marxist-Leninist (CPI-ML) in 1969. After the death of Charu Mazumdar in 1972, the party got divided and hence the movement also became fragmented. Subsequently, the formation of the People's War Group (PWG) in 1980 under the leadership of Maoist leader Kondapalli Seetharamaiah provided fresh life to the dying movement. In 2004, the movement got extra mileage when two different wings of the same movement, PWG and Maoist Communist Centre of India (MCCI), merged. The unified party was named as the Communist Party of India (Maoist).[13] Due to the violent nature of the movement initiated by the party, it has been banned under the Unlawful Activities (Prevention) Act, 1967. Despite being a banned party, "the cadre strength of the CPI (Maoist) climbed from 9300 in 2004–2005 to 10,500 in 2005–2006. Reports suggest they have a 25,000-member people's militia and 50,000 members in village-level units".[14]

[13] For a detailed historic account of the Maoist movement in India, see IDSA Occasional Paper No. 20 by Ramana (2011), Banerjee (1980) and Singh (2006).

[14] See Navlakha (2006, p. 2186).

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According to the Ministry of Home Affairs (MHA), the LWE has spread its tentacles across several states in varying intensities. States which are severely affected by the movement are: Chhattisgarh, Jharkhand, Odisha and Bihar. Andhra Pradesh, West Bengal and Maharashtra are partially affected by Naxalism. Uttar Pradesh and Madhya Pradesh are the states marginally affected by Maoism (see Fig. 5.1). Kujur (2009) gives a brief account of Maoist violence in these states during 2008. Table 5.2 shows the extent of Naxalite violence in the Red Corridor region during 2007–2011. From Table 5.2, it is evident that Naxalite violence increased alarmingly in Chhattisgarh, Jharkhand and Odisha. The epicentre of this movement has been the Dandakaranya region which is largely covered by dense forest.

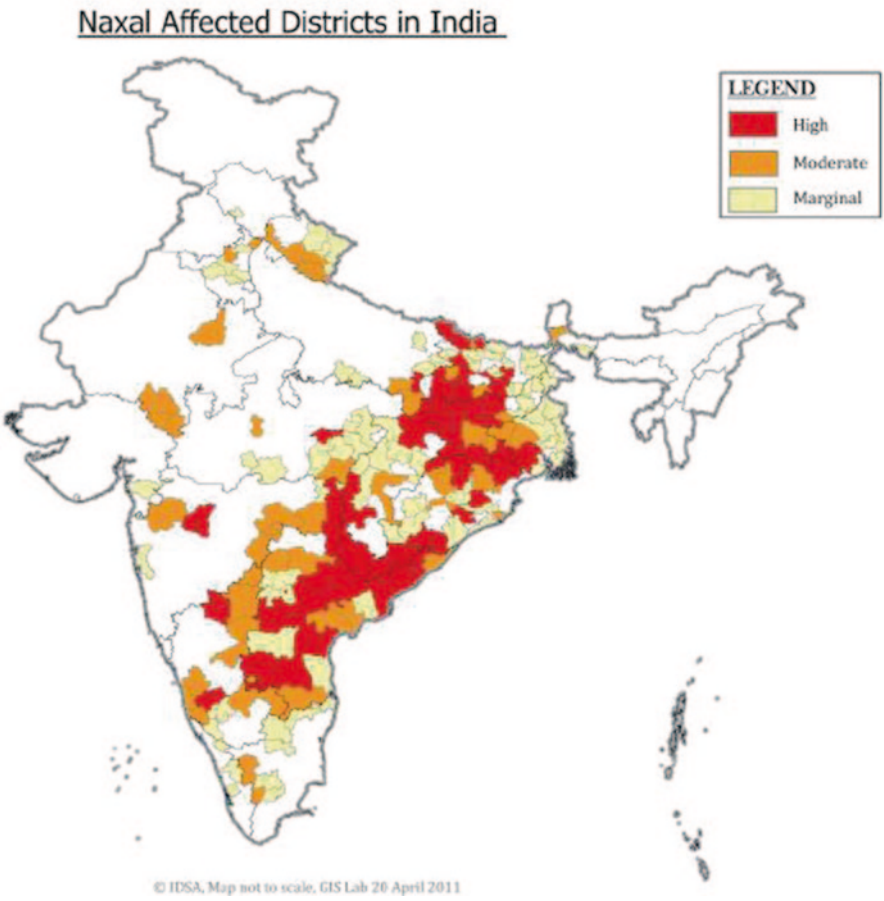

Fig. 5.1 Naxal-affected districts in India. (Source: IDSA, at: http://www.idsa.in/system/files/OP_MeasurestodealwithNaxal.pdf, accessed 23 Feb 2012)

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Table 5.2 State-wise extent of Naxal violence during 2007–2011. (Source: Ministry of Home Affairs)

State	2007		2008		2009		2010		2011	
	Incidents	Deaths	Incidents	Deaths	Incidents	Deaths	Incidents	Deaths	Incidents	Deaths
Andhra Pradesh	138	45	92	46	66	18	100	24	54	9
Bihar	135	67	164	73	232	72	307	97	313	64
Chhattisgarh	582	369	620	242	529	290	625	343	458	202
Jharkhand	482	157	484	207	742	208	501	157	515	182
Madhya Pradesh	09	2	07	00	1	–	7	1	8	0
Maharashtra	94	25	68	22	154	93	94	45	109	54
Odisha	67	17	103	101	266	67	218	79	192	53
Uttar Pradesh	9	3	4	–	8	2	6	1	1	0
West Bengal	32	6	35	26	255	158	350	258	90	41
Others	17	5	14	4	5	–	5	0	5	1
Total	*1565*	*696*	*1591*	*721*	*2258*	*908*	*2213*	*1005*	*1745*	*606*

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5.3 Going Beyond Income: Some Stylized Facts

India's prime minister Dr. Manmohan Singh has once said that Maoism or Naxalism is "the single biggest internal security challenge ever faced by our country".[15] The MHA describes Maoism as "a doctrine to capture State power through a combination of armed insurgency, mass mobilization and strategic alliances".[16] Is unequal income distribution the only plausible reason, or are there other factors that contribute to the emergence and persistence of Maoism?

Income is one of the matrices for analyzing inequality. However, inequality also persists in terms of health, education and other indicators of development (such as public services as indicated earlier). One popular notion is that the Red Corridor region is one of the most backward regions in India. Socioeconomic development of the region has been sluggish since independence. As a result, the Maoists have been able to win the confidence of the deprived sections of the population living here and have organized them to revolt against the State. The present United Progressive Alliance (UPA) government has adopted a number of development programmes specifically targeted for the welfare of tribals, but they remained impoverished and backward in terms of main development indicators: health, nutrition and education. "[T]he literacy rate of *adivasis* is at 23.8 per cent…[and as] many as 62.5 per cent of *adivasi* children who enter school dropout before they matriculate…. Among the tribals 28.9 per cent have no access whatsoever to doctors and clinics."[17] The Report of the Expert Group on Prevention of Alienation of Tribal Land and Its Restoration (2004) also highlighted a similar state of deprivation, impoverishment of the poor tribals in India. The main supporters of the Maoist movement in India have been tribals, dalits and landless peasants. There are specific Articles[18] in the Indian Constitution to safeguard interests of the tribals and their resources towards the bigger objective of achieving socioeconomic equity. However, these Articles existed only on paper, and the State failed to implement them in reality and *adivasis'* needs and demands have not been adequately addressed by the State (Kumar 2009). "[T]hey have been unable to effectively articulate their grievances through the democratic and electoral process."[19] Lack of land reforms, displacement of tribals from their traditional lands due to industrial expansion, indiscriminate extraction of minerals result in environmental degradation and affect tribal life

[15] "Ending the Red Corridor", *The Economist,* Feb 25 2010.

[16] See Frequently Asked Questions (FAQ) at http://mha.nic.in/pdfs/NM-FAQ.pdf (accessed 23 Feb 2012).

[17] See Guha (2007, p. 3306).

[18] Articles 244, 244A, 275(1), 342 and 339.

[19] See Guha (2007, p. 3305).

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adversely, rapid disappearance of common property resources (CPR), etc. are the key reasons for increasing resentment amongst the tribals. These impoverished tribals traditionally depend on forest resources for livelihood. But policies and acts like The Forest Conservation Act, 1980, virtually evicted tribals from their forests which had been the sole source of their livelihood perennially. "The commercialisation and corporatisation of forest resources have reduced the access to them [tribals]. Alienation of tribal from land and control by richer non-tribal elements from outside are significant factors for tribal unrest. Displacement due to the construction of large dams and other industries has impoverished these communities and strengthened their demand for tribal self-governance."[20] Taking advantage of tribal resentment, Maoists stood beside them as sympathizers and organized them to revolt against oppression, neglect and for their rights. "[Maoists] have been telling the *adivasis* for years that the State is an oppressor…. That is why they have taken up arms."[21]

The Maoist movement has also received tremendous support from dalit groups who are still deprived and have remained downtrodden in many states in India. According to Banerjee (2008, p. 11), "the dalits suffer from various types of disadvantages like limited employment opportunities, political marginalisation, low education, social discrimination and human rights violation". Studies have found that in some cases Maoists have been successful in protecting certain rights of tribals and dalits. In Bihar, Maoists helped the landless to acquire lands which had been taken over by the State from landlords under land reform programmes but were never redistributed amongst the landless (Banerjee 2008). In Andhra Pradesh, and elsewhere in Dandakaranya region, Maoists have been successful in securing a higher minimum wage or better prices for the poor tribals who earn their livelihood by procuring *tendu* leaves (Guha 2007; Mukherji 2010; Navlakha 2010).

From our discussion so far, one might conclude that a high proportion of dalits and tribals in the total population of a district is a sufficient condition for the rise of the Maoist movement. However, there is little evidence to support such a conjecture. "[T]here are many districts with high proportions of *adivasis* or dalits but little Naxalite activity, such as in Punjab, Haryana, Gujarat, Rajasthan and Madhya Pradesh."[22] So there is need for studying the development imbalance leading to a Maoist upsurge more rigorously without any bias. Existing studies lack empirical rigour as these are mostly anecdotal in nature and/or not based on a large sample to have a strong statistical basis. Hence, in the next section we examine the development imbalance, if any, rigorously using standard statistical techniques. We use secondary data available from nationwide surveys and census carried out by independent organizations. This precludes a subjective bias in the selection of sample households for the surveys.

[20] See Subramanian (2010, p. 25).

[21] See Kumar (2009, p. 12).

[22] See Planning Commission (2008, p. 3).

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5.4 The Red Corridor Region Vis-À-Vis Rest of India

We examine the deprivation in terms of seven development indicators, namely, access to health and health outcomes, access to education and educational outcomes, access to finance, access to communication and other basic amenities—nature of work participation, living standard and poverty. Our hypothesis is that the inability to provide quality life to the people living in the Red Corridor region is worse than that of ROI. We examine this hypothesis by analyzing whether the average outcomes of the Red Corridor region based on the seven development indicators are statistically significant or are worse than those of the regions with no history of Maoism, that is, the ROI.

5.4.1 Data

The data on population, access to healthcare facilities and distance from health facilities, health outcome, access to education and distance from educational institutions, educational outcome, access to finance, access to communication and other basic amenities, and workforce participation, are taken from the Census 2001.[23] We also use data on living standards, access to healthcare facilities and health awareness, housing condition, etc., available from the District Level Household and Facility Survey (DLHS-3) conducted[24] nationwide by the International Institute for Population Sciences (IIPS), Mumbai, in 2007–2008. Data on per capita income (PCI) are taken from various reports published by the Planning Commission of India. Data on district-level poverty measured by the headcount ratio (HCR) are taken from Chaudhuri and Gupta (2009)[25].

5.4.2 Methodology

The study compares development indicators of the districts in the Red Corridor region with that of selected districts from the ROI. The districts of Red Corridor region studied here are given in the upper panel (panel A) of Table 5.3. These districts are selected from the list of districts identified for the implementation of the Integrated Action Plan (IAP).[26] The comparison districts[27] from the ROI are selected

[23] We extensively used the Village Directory of the respective districts available from Census 2001.

[24] The survey was funded by Union Ministry of Health and Family Welfare, United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF).

[25] Chaudhuri and Gupta (2009) measure district-level HCR based on 61st round of Consumer Expenditure Survey (CES) conducted by National Sample Survey Organisation (NSSO).

[26] See http://pcserver.nic.in/iapmis/state_district_list.aspx.

[27] We consider a sample of districts because generating district level data from the raw census data is a painstaking process and it is also costly. Moreover, the number of districts falling in the Red

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Table 5.3 Composition of sample—Red Corridor districts and ROI

State	Districts
A. Districts of Red Corridor region (N = 60)	
Andhra Pradesh	Adilabad, East Godavari, Karimnagar, Khammam, Srikakulam, Visakhapatnam, Vizianagaram, Warangal
Bihar	Arwal[a], Aurangabad, Gaya, Jamui, Jehanabad, Kaimur, Munger, Nawada, Rohtas
Chhattisgarh	Bastar, Bijapur[a], Dantewada, Jashpur, Kanker, Koriya, Narayanpur[a], Rajnandgaon, Surguja
Jharkhand	Bokaro, Chatra, Garhwa, Giridih, Gumla, Hazaribagh, Khunti[a], Kodarma, Latehar[a], Lohardaga, Pachim Singhbhum, Palamu, Purbi Singhbhum, Ramgarh[a], Ranchi (Rural), Saraikela[a], Simdega[a]
Odishaw	Debagarh, Gajapati, Ganjam, Jajapur, Kandhamal, Kendujhar, Koraput, Malkangiri, Mayurbhanj, Nabarangapur, Nayagarh, Rayagada, Sambalpur, Sundargarh
West Bengal	Bankura, Medinipur (West), Puruliya
B. Sample districts from the rest of India (ROI;N = 55)	
Gujarat	Banas Kantha (12), Bharuch (48), Bhavnagar (18), Dohad (7), Gandhinagar (36), Jamnagar (90), Junagadh (20), Mahesana (20), Panch Mahals (11), Rajkot(21), Sabar Kantha (13), Valsad (49)
Himachal Pradesh	Chamba (62.7), Kangra (19.7), Kinnaur (32), Kullu (21.3), Lahul and Spiti (62.7), Mandi (17.5), Shimla (25.8), Solan (46.4), Una(23.1)
Punjab	Fatehgarh Sahib (35.6), Gurdaspur (23.5), Hoshiarpur (24), Jalandhar (31.7), Mansa (25), Muktsar (24.6), Nawan Shehar (30.4), Patiala (30.2), Rupnagar (28.8), Sangrur (29.2),
Rajasthan	Banswara (9.6), Bharatpur (13.29), Bhilwara (18.7), Bikaner (18.1), Chittaurgarh (12.89), Churu (8.9), Dholpur (8.8), Dungarpur (10.3), Ganganagar (20.3), Kota (19), Pali (14.24), Rajsamand (13.85)
Tamil Nadu	Coimbatore (27.6), Krishnagiri[a] (15.7), Nagapattinam (18.9), Namakkal (28.1), Nilgiri (20), Perambalur (13.5), Thiruvarur (16.2), Thoothukodi (25.7), Tirunelveli (21.1), Villupuram (13.3), Virudhunagar (29.8), Vellore (20.9)

Per capita income (PCI) of the districts from the rest of India in 1999 is indicated in parenthesis. Figures are in ₹ 1000

[a] Districts created newly in 2001 or later

from five[28] states: Gujarat, Himachal Pradesh, Punjab, Rajasthan and Tamil Nadu. In these five states, the Maoist movement has not proliferated. The five ROI states are selected randomly in such a way that geographic heterogeneity is captured as well. Districts from each of these five states were selected on the basis of the PCI in 1999.[29] The districts of each of these five states are sorted in descending order in

Corridor region is relatively small compared to the number of districts in the rest of India. Hence sampling from the rest of India makes more sense.

[28] We limit our analysis to five states for convenience.

[29] For Gujarat, due to non-availability of data on PCI in1999, we use Gross District Domestic Product per capita in 2001 available from Indicus Analytics' dataset; for the same reason, for Rajasthan, PCI in 2001 series is used for sorting districts.

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terms of PCI in 1999 and then top four, middle four[30] and bottom[31] four districts are selected from the sorted list. Thus, in the sample, a total of 60 and 55 districts are taken from both Red Corridor region and the ROI, respectively.

The following dimensions of development are considered in the analysis:

1. Access to health, health outcome and awareness—availability of healthcare facilities, distance from such facility, infant mortality rate (IMR), life expectancy at birth (LEB), proportion of household using safe drinking water and proportion of household having a vaccination card
2. Access to education and educational outcome—availability of educational institutions, distance from educational institution, school enrolment rate and literacy rate
3. Access to finance—availability of financial institutions, distance from financial institutions
4. Access to communication and other basic amenities—electricity, post office, distance from the post office, distance from bus and railway services, average distance from the nearest town, access to paved road and mud road
5. Nature of work participation—marginal workers, main workers and agricultural workers (all as a percentage of total workers), workforce participation rate
6. Living standard— roportion of household living in *pucca* houses
7. Poverty—HCR

We test whether there is any statistically significant difference between the mean outcomes of the Red Corridor region and those of the ROI sample. We do the one-tailed *t* test[32] and report both estimated *t* statistics and one-tailed *p* values for all the indicators. One-tailed *t* tests are done because for all the indicators under the alternative hypothesis, we conjecture that the Red Corridor region is more deprived or backward compared to the ROI sample.

5.4.3 Results

As mentioned in the previous section, the Maoist movement got large-scale support from two groups of population, viz., the tribals and the dalits. Hence, it is imperative to look into the demographic composition of the population of the Red Corridor region vis-à-vis our ROI sample. From Table 5.4, it is evident that the Red Corridor region has a higher proportion (27.39%) of tribal (schedule tribe, ST) population compared to our ROI sample (11.37%). However, as Table 5.4 shows, the Red Corridor region has a relatively lesser proportion (15.74%) of dalit (schedule caste,

[30] For Himachal Pradesh and Punjab, one and two districts respectively were chosen from the middle of the distribution because these states have relatively less number of districts.

[31] Selection of districts from the middle of the distribution might not change the average outcomes significantly.

[32] *T* test as a parametric test is valid only when the underlying distributions of the variables follow normal distribution. The assumption of normality is a strong assumption. Hence, we also tested the differences in development outcomes between the two groups of districts using nonparametric tests which gave qualitatively similar results.

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Table 5.4 Summary statistics. (Source: authors' own calculation)

	Min	Max	Mean	SD	N
	SC population (% of total population)				
Red Corridor region	2.96	90.5	15.74	13.4	52
Rest of India sample	2.33	96.8	19.48	15.2	54
	ST population (% of total population)				
Red Corridor region	0.08	79.9	27.39	24.1	52
Rest of India sample	0	83.8	11.37	22.4	54
	Forest land (in km^2)				
Red Corridor region	272	485,928	120,191	110,803	52
Rest of India sample	0	415,451	61,300	79,330	53
	No. of hospitals and dispensaries[a]				
Red Corridor region	1.15	18.12	5	3.58	52
Rest of India sample	0.82	90.29	11	14.47	54
	No of health centres[a] *(health centre + PHC + PH subcentre)*				
Red Corridor region	2.77	51.15	15.44	9.42	52
Rest of India sample	4.01	138.4	21.7	20.3	54
	Any govt. health facility (% of villages)				
Red Corridor region	11.9	100	44.13	25.69	55
Rest of India sample	3.6	96.2	48.63	16.86	55
	IMR				
Red Corridor region	36	121	65.38	19.27	49
Rest of India sample	21	144	53.65	25.09	44
	No. of primary school[a]				
Red Corridor region	32.68	229.86	98.94	44.33	52
Rest of India sample	25.98	638	95.31	91.82	54
	Literacy rate (%)				
Red Corridor region	30.5	77.2	55.29	10.78	51
Rest of India sample	44.6	81.5	68.05	10.05	54
	No. of cooperative banks[a]				
Red Corridor region	0.09	7.22	1.33	1.42	52
Rest of India sample	0.66	15.05	3.55	3.05	54
	Household with electricity connection (%)				
Red Corridor region	4.6	85.5	28.68	20.69	51
Rest of India sample	27.2	97.6	77.2	18.32	54
	Proportion of population having access to paved road				
Red Corridor region	12.44	72.24	45.56	28.58	52
Rest of India sample	19.34	128.95	62.20	18.96	54
	Main workers (% of total workers)				
Red Corridor region	52.18	86.07	67.96	8.58	49
Rest of India sample	51.24	92.46	78.19	10.47	54

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Table 5.4 (continued)

	Min	Max	Mean	SD	N
	Head count ratio (HCR)				
Red Corridor region	3.73	88.16	39.49	18.62	50
Rest of India sample	0.85	53.62	16.68	13.13	52
	Log (per capita income–1999)				
Red Corridor region	8.45	9.94	9.27	0.38	53
Rest of India sample	8.60	11.07	9.88	0.50	55

SC schedule tribe, *SD* standard deviation, *ST* schedule tribe
[a] Measured per one lakh population

Table 5.5 Mean test results of SC and ST population and forest land (km^2)

–	Mean of Red Corridor region	Mean of ROI sample	Test result	*N*
SC population (% of total population)	15.74	19.49	$t=1.34^a$ (0.90)	106
ST population (% of total population)	27.39	11.37	$t=-3.54^a$ (0.000)	106
Forest Land (km^2)	120,191	61,300	$t=-3.12^a$ (0.001)	105

One-tailed *p* values are in parenthesis
ROI rest of India, *SC* schedule caste, *ST* schedule tribe
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0, H_a: mean (rest of India sample) —mean (Red Corridor region) < 0

SC) population compared to our ROI sample (19.48 %).[33] Table 5.5 shows that this difference is statistically significant as well. Also, from Table 5.5 we can see that Red Corridor region has higher proportion of the average land covered by forest (120,191 km^2) as compared to the ROI sample (61,300 km^2). Large forest lands are often used by the Maoists as hideouts to evade arrest and to organize armed struggles against the State. Table 5.4 also shows intra-group variation (standard deviation, SD) in the development outcomes for most of the indicators considered in this study. In terms of PCI, in 1999, measured in logarithmic terms, the Red Corridor region is also worse off (9.27) in comparison to the ROI sample (9.88).

5.4.4 Access to Health, Health Outcome and Awareness

During 2001, sample districts in the Red Corridor region had on an average five hospitals and dispensaries per one lakh population in comparison to 11 for the ROI

[33] The focus of this chapter is on deprivations of the two regions in terms of various indicators of development and hence we emphasize more on SC and ST populations because they are the most deprived groups in India. We do not explicitly mention the general category population here, although they are the majority in terms of population share in both the sample groups.

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Table 5.6 Mean test results of access to healthcare facilities (2001)

	Mean of Red Corridor region	Mean of ROI sample	Test result	*N*
No. of hospitals and dispensaries[a]	4.94	11.05	$t=3.00$[b] (0.001)	106
No. of health centres[a] *(health centre + PHC + PH subcentre)*	15.44	21.75	$t=2.06$[b] (0.02)	106
No. of registered medical practioners[a]	8.40	10.36	$t=0.74$[b] (0.22)	106
No. of community health workers[a] *(CHW)*	4.77	10.64	$t=3.01$[b] (0.001)	106

ROI rest of India, *PHC* primary health centre
[a] Measured per one lakh population

342 sample (see Table 5.4). Table 5.6 shows that this unequal access is also statistically
343 significant (t statistic = 3.0). The Red Corridor region lacks access to health facili-
344 ties not only in terms of hospitals and dispensaries but also in terms of the number
345 of health centres and community health workers. All the t statistics except for regis-
346 tered medical practitioners reported in Table 5.6 are statistically significant in terms
347 of the level of significance at 5 %. Apart from availability, distance from the health
348 facilities also matters. If the health centre is far away, then poor households have
349 to incur higher cost even for minor health checkups, and that acts as a deterrent to
350 accessing health services. Table 5.7 shows that approximately 38 % of the Red Cor-
351 ridor district's population as compared to 22 % of the population of our ROI sample
352 districts had access to a primary health centre (PHC) which was at a distance of
353 10 km or more, and this difference is statistically significant (t statistic = −6.30).
354 Average health outcomes of the districts in the Red Corridor region are more ap-
355 palling compared to the ROI sample. The average IMR of the Red Corridor region
356 was 65.38 in 2001, and the same for the ROI sample was 53.65 (see Table 5.8).
357 Average LEB figures were 62 years and 65 years for the Red Corridor region and
358 the ROI sample, respectively. Differences in these health outcomes are statistically
359 significant as well (t statistics are −2.50 and 2.41 for IMR and LEB, respective-
360 ly). Using data from the DLHS survey, we examine whether there was any sign of

Table 5.7 Distance from primary health centre (PHC) in 2001

Proportion of population having access to PHC with	Mean of Red Corridor region	Mean of ROI sample
0 < distance ≤ 5 km	16.48	21.39
5 km < distance ≤ 10 km	23.77	22.28
Distance > 10 km[a]	37.18	22.47

One-tailed p values are in parenthesis
AQ4
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] t test result for this category—$t = -6.30$ (one-tailed p value = 0.000); d.f = 104
[b] Measured per one lakh population
[c] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

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Table 5.8 Mean test results of health awareness and health outcomes

–	Mean of Red Corridor region	Mean of ROI sample	Test result	*N*
HH using safe drinking water (%)	57.16	84.60	$t=8.31^{b}$ (0.000)	91
HH with vaccination card (%) (2007–2008)	48.88	40.51	$t=-2.68^{b}$ (0.99)	109
IMR	65.38	53.65	$t=-2.50^{a}$ (0.007)	93
LEB	62.93	65.20	$t=2.41^{b}$ (0.009)	90

One-tailed *p* values are in parenthesis
ROI rest of India, *HH* household, *IMR* infant mortality rate, *LEB* life expectancy at birth
H_0: mean (rest of India sample)—mean (red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

Table 5.9 Mean test results of access to healthcare facilities (2007–2008)

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
Proportion of villages with a PHC	16.77	11.46	$t=-1.19^{b}$ (0.88)	110
Proportion of villages with any govt. health facility	44.13	48.63	$t=1.08^{b}$ (0.14)	110
Proportion of villages with a doctor	10.75	16.87	$t=3.15^{b}$ (0.001)	110
Proportion of villages with ASHA	57.86	38.36	$t=-3.26^{b}$ (0.99)	110

One-tailed *p* values are in parenthesis
ROI rest of India, *PHC* primary health centre
H_0: mean (rest of India sample))—mean (red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

AQ5

improvement in health accessibility at least at the village level in 2007–2008. In Table 5.9, we report average accessibility figures at the village level. At the village level, disparity exists in terms of availability of doctor (*t* statistic = 3.15). For other government-run health facilities, we do not find any statistically significant difference in the mean accessibility at the village level.

5.4.5 Access to Education

From Table 5.4, it is evident that the Red Corridor region had more number of primary schools (98) per one lakh population compared to the ROI (95.31) in 2001, but from Table 5.10 we can see that this difference is not statistically significant (*t*

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Table 5.10 Mean test results of access to educational institutions

–	Mean of Red Corridor region	Mean of ROI Sample	Test result	*N*
No. of primary schools[a]	98.94	95.31	$t=-0.26$[b] (0.60)	106
No. of middle schools[a]	22.21	26.24	$t=0.93$[b] (0.17)	106
No. of secondary schools[a]	8.78	13.47	$t=2.18$[b] (0.02)	106
No. of senior secondary schools[a]	1.55	4.54	$t=3.68$[b] (0.000)	106
No. of colleges[a]	0.73	0.37	$t=-3.16$[b] (0.99)	106

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] Measured per one lakh population
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

370 statistic = −0.26). However, when it comes to higher levels of school education (sec-
371 ondary and senior secondary), the Red Corridor region has much lower access in
372 comparison to the ROI. There were 8.78 secondary schools per one lakh population
373 in the Red Corridor region as compared to 13.47 secondary schools per one lakh
374 population of the ROI sample (see Table 5.10). The Red Corridor region had similar
375 low accessibility to senior secondary schools as well. However, on the contrary, the
376 Red Corridor region had a higher number of colleges (0.73) per one lakh population
377 compared to the ROI sample (0.37) but this difference is not statistically significant
378 (*p* value is high). Distances from educational institutions also determine accessi-
379 bility and educational outcomes. If schools are far, then it takes more time for the
380 students to reach schools and often non-availability of paved roads poses a serious
381 problem in reaching schools during the rainy season. This can adversely affect edu-
382 cational outcomes, for example, school attendance. However, as Table 5.11 shows,

Table 5.11 Mean test results of distance from primary school

Proportion of population having access to primary school with	Mean of Red Corridor region	Mean of ROI Sample	Test result	*N*
0 < distance ≤ 5 km	7.26	3.72	$t=-2.70$[b] (0.99)	105
5 km < distance ≤ 10 km	2.16	0.19	$t=-4.07$[a] (0.000)	93
Distance > 10 km	2.26	0.04	$t=-1.56$[a] (0.06)	83

One-tailed *p* values are in parenthesis
ROI res of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

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Table 5.12 Mean test results of educational outcomes

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
School enrolment (%)	41.80	52.95	$t=6.57^a$ (0.000)	105
Literacy rate (%)	55.29	68.06	$t=6.26^a$ (0.000)	105

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

there is no statistical difference at the 5% level of significance between the Red Corridor region and the ROI, in terms of the proportion of population having access to the primary school within 5-km distance and above 10-km distance, though educational outcomes vary significantly (see Table 5.12). Average school enrolment rates were 41.80 and 52.95% for the Red Corridor region and ROI sample, respectively, in 2001, and this difference is highly statistically significant (*p* value is too low). The other educational outcome, the literacy rate, was also lower for the Red Corridor region (55.29%) as compared to the ROI sample (68%). If people are illiterate, then they cannot effectively participate in the mainstream economy and hence their income-earning potential remains low. They also tend to suffer from other impoverishments such as poor health, low productivity, etc. This is perhaps what has happened in case of the poor households of the Red Corridor region as well.

5.5 Access to Finance

Financial inclusion has become a buzzword in recent development policy pedagogy. Better access to finance reduces the poor households' dependence on usurious moneylenders and helps them manage their money more efficiently. We consider a proportion of households having a bank account a proxy for access to finance. Although this is a very narrow and imperfect measure, but going by this measure, we find that financial inclusion in the Red Corridor region has been sluggish as compared to the ROI (see Table 5.13). In 2001, districts belonging to the Red Corridor region on an average had 27% households with a bank account, while sample districts from the ROI had around 39% households with bank accounts. The difference in mean test also quite strongly rejects the null hypothesis of equal means (*p* value is very low). Penetration of the bank account also depends on availability of bank branches and distance from the branch. From Table 5.13, it is also evident that the Red Corridor region on an average had lower number of commercial banks, cooperative banks and agricultural credit societies per one lakh population in comparison to the ROI.

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Table 5.13 Mean test results of access to finance

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
HH with bank account (%)	26.67	38.68	$t=4.89^{b}$ (0.000)	105
No. of commercial banks[a]	3.93	5.02	$t=1.75^{b}$ (0.04)	106
No. of cooperative banks[a]	1.33	3.54	$t=4.82^{b}$ (0.000)	106
No. of agricultural credit[a] *societies*	7.35	15.31	$t=3.62^{b}$ (0.000)	106
No. of non-agricultural[b] *credit societies*	5.51	3.38	$t=-0.99^{b}$ (0.84)	106

One-tailed *p* values are in parenthesis
ROI rest of India, *HH* household
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] Measured per one lakh population
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

Table 5.14 Mean test results of distance from cooperative bank

Proportion of population having access to cooperative bank with	Mean of Red Corridor region	Mean of ROI sample	Test result	N
0 < distance ≤ 5 km	12.57	21.29	$t=3.97^{b}$ (0.000)	106
5 km < distance ≤ 10 km	22.25	19.38	$t=-1.55^{a}$ (0.06)	106
Distance > 10 km	47.56	26.21	$t=-5.91^{a}$ (0.000)	106

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

This unequal availability of financial institutions is also found to be highly statistically significant for all types of financial institutions considered: commercial banks and cooperative banks, except for agricultural credit societies. The distance from the financial institution determines the opportunity cost of visiting the branch of the financial institution. Table 5.14 shows that nearly 48% of the population in the Red Corridor districts had to travel more than 10 km to access a cooperative bank compared to only 26% in the ROI in 2001. This difference in accessibility in terms of distance is highly significant at any conventional level of significance.

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5.6 Access to Communication and other Basic Amenities

Access to certain basic amenities (e.g. electricity) and communication services or facilities enhances quality of life. Khandker et al. (2012) show that rural electrification positively affects rural poverty alleviation. In 2001, only 28% of the households in the sample districts from the Red Corridor region were using electricity as a source of light. The comparable figure for the ROI was 77% (see Table 5.15). The difference in mean test reveals that this difference is statistically significant (t statistic = 12.68). Nowadays, modern post offices serve not only as an access point for sending mails but also receive savings deposits, disburse remittances, etc. In 2001, the average number of post offices per one lakh population in the Red Corridor districts was 17, while that of the ROI sample was 27; the difference in mean test rejects the null of equal means (t statistic = 2.81). Table 5.16 shows that in the Red Corridor region, approximately 13% of the population had access to a post office within a range of 5–10 km, while about 5% had access to a post office within the same distance range for the ROI sample.

Better access to road connectivity has several positive effects (Bell and Dillen 2012). Firstly, improved access to road connectivity helps in integrating remote rural economies with bigger markets and thus opens up opportunities for rural households to get better prices and hence higher incomes. Secondly, it favourably affects school attendance of both students and teachers, especially during the rainy season. Thirdly, it can help patients' access to health care and get timely treatment, reducing the morbidity rate. In 2001, only 45% of the population in the Red Corridor districts on an average had access to a paved road, while 62% of the population in the ROI had access to the same facility (see Table 5.15). This inequality in access to a paved road also turns out to be statistically significant (t statistic = 3.51). Proximity to towns also has several advantages: access to a bigger market, educational institutions and health facilities. The average distance of villages of the Red Corridor

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Table 5.15 Mean test results of access to communication and other amenities

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
HH with electricity connection (%)	28.68	77.19	$t = 12.68^{b}$ (0.000)	105
No. of post offices[c]	17.03	27.36	$t = 2.81^{b}$ (0.003)	106
Proportion of population having access to mud road	62.00	44.17	$t = -3.77^{a}$ (0.000)	104
Proportion of population having access to paved road	45.56	62.20	$t = 3.51^{b}$ (0.000)	106
Avg. distance from nearest town (in km)	33.15	19.42	$t = -4.66^{a}$ (0.000)	106

One-tailed p values are in parenthesis
ROI rest of India, *Avg.* average
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0
[c] Measured per one lakh population

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Table 5.16 Mean test results of distance from communication services

–	Mean of Red Corridor region	Mean of ROI Sample	Test result	N
Proportion of population having access to post office with				
0 < distance ≤ 5 km	34.11	24.01	$t = -3.38^{b}$ (0.99)	106
5 km < distance ≤ 10 km	13.04	5.35	$t = -6.19^{a}$ (0.000)	106
Distance > 10 km	4.45	1.86	$t = -4.04^{a}$ (0.000)	102
Proportion of population having access to bus services with				
0 < distance ≤ 5 km	21.46	10.89	$t = -5.27^{b}$ (1)	103
5 km < distance ≤ 10 km	17.28	4.10	$t = -9.52^{a}$ (0.000)	101
Distance > 10 km	15.10	2.37	$t = -6.74^{a}$ (0.000)	96
Proportion of population having access to railway services with				
0 < distance ≤ 5 km	6.75	9.47	$t = 2.42^{b}$ (0.009)	99
5 km < distance ≤ 10 km	11.53	14.04	$t = 1.66^{a}$ (0.95)	101
Distance > 10 km	67.81	50.98	$t = -3.83^{a}$ (0.000)	105

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

districts from the nearest town was 33 km in comparison to the ROI figure of 19 km. This difference in distance is also statistically significant.

Buses and railways are the two essential communication services. On an average, about 15 and 2% of the population, respectively, in the Red Corridor and the ROI sample districts had access to bus services but at a distance exceeding 10 km (see Table 5.16). This difference in means is statistically significant (*t* statistic = −6.74). Railway connectivity is even worse in the Red Corridor districts. More than 65% of the population in the Red Corridor region had to travel more than 10 km to avail railway services but only around 50% of the population in the ROI sample had to do so, and this difference in accessing railway services is statistically significant at 5% level of significance.

5.7 Nature of Work Participation

According to Census 2001 concepts and definitions, a worker is considered to be a main worker (marginal worker) if he/she has participated in any economically productive activity for more than 6 months (less than 6 months) during the reference

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Table 5.17 Mean test results of nature of workforce

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
Main workers (% of total workers)	67.96	78.19	$t=5.44^{b}$ (0.000)	103
Marginal workers (% of total workers)	32.03	21.80	$t=-4.53^{a}$ (0.000)	103
Agricultural workers (% of total workers)	35.92	18.01	$t=-8.00^{a}$ (0.000)	103
Workforce participation rate	42.58	44.56	$t=1.47^{b}$ (0.07)	105

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

period (usually 1 year). From Table 5.17, it is evident that in the Red Corridor region, on an average, a higher proportion (32%) of the workers were marginal workers as compared to the ROI sample (22%), and the difference is statistically significant (*t* statistic = −4.53). The Red Corridor region also had a statistically significant higher proportion of workers (35%) engaged in agricultural work as compared to the ROI sample (18%). Finally, the average workforce participation rate—measured by the proportion of population which (marginal plus main workers) participates in any economically productive activity during the reference period—was lower (42%) for the Red Corridor districts as compared to the ROI sample districts (44%). This difference in workforce participation rate is also found to be statistically significant at 10% level of significance.

5.8 Living Standard

We consider the type of housing, viz., *pucca* house as a proxy for standard of living. Table 5.18 shows that only 16% of the population in the Red Corridor districts on an average resided in *pucca* houses which is less than half of the proportion of population (42%) that resided in *pucca* houses in the ROI in 2001. This difference in the proportion of people staying in *pucca* houses between the Red Corridor region and

Table 5.18 Mean test results of quality of housing

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
Household staying in pucca houses (%)	16.66	42	$t=7.63^{a}$ (0.000)	95

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0

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Table 5.19 Mean test results of poverty

–	Mean of Red Corridor region	Mean of ROI sample	Test result	N
Head count ratio (HCR)	39.5	16.68	$t=-7.12^{a}$ (0.000)	102

One-tailed *p* values are in parenthesis
ROI rest of India
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0

476 the ROI is highly statistically significant. This implies that significant disparity ex-
477 ists in the average standard of living in the Red Corridor region vis-à-vis the ROI.

478 5.9 Poverty

479 From Table 5.19, it is evident that a large proportion (39%) of the population in
480 the Red Corridor districts lived below the poverty line (BPL) as compared to the
481 proportion (16%) of people in the ROI sample districts in 2004. The difference
482 in the average poverty outcomes is also highly statistically significant (*p* value is
483 low).This high rate of poverty in the Red Corridor region is not surprising given the
484 degree of deprivation of the region in terms of other development indicators previ-
485 ously discussed.

486 5.10 Is There Hope?

487 The Registrar General of India recently released house-listing data from the Census
488 2011. The data are available at the district level for the Indian states. Hence, we also
489 analysed the data for some of the development indicators for our sample districts to
490 examine whether the development gaps between the Red Corridor region and the
491 ROI are persisting or narrowing down over the decade, 2001–2011. In other words,
492 our objective was to examine whether there was any sign of improvement in the
493 development scenario in the Red Corridor region vis-à-vis the ROI sample districts.
494 We specifically examined access to banking (percentage of households having bank
495 accounts) and the following indicators of living standard: percentage of households
496 with electricity connection, percentage of households residing in houses with ce-
497 mented floors, percentage of households residing in houses with concrete roofs,
498 and percentage of households living in houses with walls made of grass/thatch/
499 bamboo/plastic or polythene. From Table 5.20, it is evident that access to banking
500 services shows a marked improvement in the Red Corridor region. The percentage
501 of households with bank accounts increased from 26 to 49% between 2001 and
502 2011 in the Red Corridor region. However, the gap in access to banking between the
503 Red Corridor region and the ROI sample over the decade 2001–2011 has increased

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Table 5.20 Common indicators of living standard between 2001 and 2011: a comparison

	Mean of Red Corridor region	Mean of ROI sample	Test result	N
HH with electricity connection (%)				
2001	26.31	76.89	$t=13.91^{b}$ (0.000)	110
2011	44.09	87.07	$t=10.54^{b}$ (0.000)	111
HH with bank account (%)				
2001	26.87	37.94	$t=4.58^{b}$ (0.000)	110
2011	49.50	66.02	$t=6.65^{b}$ (0.000)	111
HH floor made of cement (%)				
2001	19.81	34.77	$t=4.63^{b}$ (0.000)	110
2011	26.07	41.57	$t=4.41^{b}$ (0.000)	111
HH roof made of concrete (%)				
2001	15.74	22.85	$t=2.75^{b}$ (0.003)	110
2011	23.10	32.96	$t=2.75^{b}$ (0.003)	111
HH wall made of grass/thatch/bamboo/plastic/polythene, etc. (%)				
2001	4.61	3.12	$t=-1.50^{a}$ (0.06)	110
2011	4.44	2.70	$t=-2.35^{a}$ (0.010)	111

One-tailed *p* values are in parenthesis
ROI rest of India, *HH* household
H_0: mean (rest of India sample)—mean (Red Corridor region) = 0
[a] H_a: mean (rest of India sample)—mean (Red Corridor region) < 0
[b] H_a: mean (rest of India sample)—mean (Red Corridor region) > 0
[c] Measured per one lakh population

significantly from 11 to 16 percentage points. Coming to indicators of living standard, our results show that the percentage of households with electricity connection, percentage of households residing in houses with cemented floors, and percentage of households residing in houses with concrete roofs in the Red Corridor region increased between 2001 and 2011 but the gaps between the Red Corridor region and the ROI sample districts persisted. Houses with walls made of grass/thatch/bamboo/plastic or polythene signify poor living standard, and the proportion of households residing in such houses in the Red Corridor region dwindled marginally between 2001 and 2011 from 4.61 to 4.44%. However, in the ROI sample districts, the same figure fell to 2.7% in 2011 from 3.12% in 2001.

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5.11 Red Corridor Region and the Government

The government resorted to "local resistance", popularly known as "Salwa Judum" to combat the Maoist movement in certain states, for example, Chhattisgarh (Navlakha 2006; Kumar 2009). According to Subramanian (2005, p. 729), "[t]he socio-economic factors behind [Maoist movement] must be analysed with detailed investigation of the patterns of administrative interaction with the rural power structure". On the other hand, police atrocities and harassment of the tribals and dalits are also cited as reasons for their resentment against the government (Subramanian 2010).

At policy level, to combat Maoism in India, the government has adopted a mix of carrot and stick policies. On the one hand, it increased administrative and security measures in the region. Security-related expenditure scheme (SRE) for modernization of the police force for fighting the Maoists, formation of task forces and a centralized coordination centre headed by the union home secretary with its state counterparts and director general of police (DGP) of Naxalite-affected states are some of the steps towards organized retaliation against the Maoists. The government has tried to initiate peace talks with the Maoists with the help of mediators but most peace-talk initiatives have been futile so far[34] (Navlakha 2006; Singh 2006). On the other hand, recognizing the development gaps in the Red Corridor region, the government adopted a number of programmes and policies to improve the socioeconomic situation. In Box 2, we discuss very briefly the main programmes,[35] and policies initiated by the government to accelerate holistic development of the region.

Box 2: Development Policies Initiated by the Government: 2004–2014

I. ***Forest Rights Act, 2006***—this act was enacted primarily to safeguard the rights of the tribals who have been living in forests for generations and to mitigate the injustice by earlier forest acts (e.g. Indian Forest Act, 1927, Wild Life Protection Act, 1972, Forest Conservation Act, 1980). The act recognizes three rights: land rights, use rights over minor forest products (e.g. tendu leaves, herbs, etc.) and grazing grounds and right to protect and conserve the forests.

II. ***The National Rehabilitation and Resettlement Policy (NRRP)***—this policy was introduced in 2007 to give adequate compensation to poor tribals who had been displaced from their own lands due to industrial expansion. Land in return for land, employment opportunity for one of the members of the displaced household, scholarships for the wards and housing benefits are some of the key compensatory features of the policy.

[34] One main precondition for peace talk was that the Maoists would have to give up arms before the dialogue began. Also see P. Singh, "Naxal Threat and State Response" Source: http://hrm.iimb.ernet.in/cpp/pdf (Accessed 3 March 2012).

[35] Here we discuss only those government schemes which were implemented with special emphasis on Red Corridor region. Other schemes which are implemented at a pan-India level across the length and breadth of the country are not mentioned here.

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III. ***Backward Districts Initiative (BDI)***—the BDI scheme was launched as one of the components of Rashtriya Sam Vikas Yojana (RSVY) which was run by the Planning Commission since 2004. The two schemes together cover nearly the entire Red Corridor region. A total of 100 backward districts of which 32 were affected by LWE were covered under the BDI. The number of districts per state was decided on the basis of incidence of poverty. Selection of backward districts in each state was done on the basis of a composite index[36] which comprised the value of output per agricultural worker, agricultural wage rate and proportion of SC and ST in the district population. Effective coordination between the Centre and the state governments is crucial for the success of these types of schemes.

IV. ***Backward Region Grant Fund (BRGF)***[37]—this programme was launched by the Ministry of Panchayati Raj in 2006–2007 to "redress regional imbalances in development". The main objective of the programme was to provide supplementary financial assistance to the states to meet "critical gaps" in local infrastructure and other development needs of some pre-identified backward districts of the respective states. The salient features of the scheme were "participatory planning, decision-making, implementation and monitoring, [which] reflect [locally] felt needs".

V. ***Integrated Action Plan (IAP)***[38]—this scheme was launched under the BRGF programme for 82 selected tribal and backward districts of India. The implementation period of the scheme was 2010–2011 and 2011–2012 and a sum of ₹ 25 crores and ₹ 30 crores, respectively, were sanctioned for each year for each district. The objective of the scheme was to build public infrastructure and provision of some basic services like school, anganwadi centres, primary health centres, drinking water supply, roads, etc.

VI. ***Panchayat Extension to Scheduled Areas Act (PESA)***—this act came into effect in 1996 when the Indian Parliament passed a special legislation as an annexure to the 73rd Amendment of the Constitution. The new act entrusted special powers to the Gram Sabha in the scheduled areas. The key objective of the act was to empower the local Gram Sabha for efficient management of natural and community resources, conservation and protection of traditional customs and rituals and management of non-timber forest products.

Some of the above-mentioned schemes could not yield the desired results due to improper implementation, low level of community involvement, under or misutilization of funds. For instance, according to the RSVY evaluation study report

[36] Each of the parameters was given equal weights in the computation of the index.

[37] For more details about the scheme visit: http://www.nird.org.in/brgf/index.html.

[38] For more details about the scheme visit: http://pcserver.nic.in/iapmis/login.aspx.

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(2008) commissioned by the Planning Commission, 37% of the RSVY funds was originally proposed for agricultural improvement in Bastar district in Chhattisgarh but only 24% was actually spent for such a purpose. The figures for addressing unemployment of the same district were even more dismal (37% was proposed and 13% was actually utilized). Even benefits of existing employment generation programmes like Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA) do not accrue in its entirety to the poor beneficiaries. A study conducted by Banerjee and Saha (2010) in the Red Corridor region to evaluate the impact of MGNREGA on poor households' livelihoods found that de facto the average mandays of employment per household under the said programme was "much lower" than the de jure 100 days of employment under the programme. Also, wages received by the households were lower than the minimum wages stipulated under the task rate system[39] at the district level. To circumvent this problem, the government resorted to payments through bank accounts and post offices. But this could not reduce the misery of the poor workers. They either lost working days by frequently visiting the banks or post offices for payments or got paid less than what they were entitled to due to dishonesty on the part of bank officials or lack of information about the functioning of the bank accounts.[40] On the positive side, the study found that wage income earned under MGNREGA was mostly spent to meet household's food consumption expenditure and whatever remained after that was invested in agriculture. Banerjee and Saha (2010, p. 44) conclude that, such investment "has resulted in an increase in crop yield in the study regions…The increase in the crop yield has reduced the livelihood vulnerability of the small and marginal farmers". Increase in employment opportunities in the study areas after the implementation of MGNREGA resulted in attenuation of the propensity for outmigration amongst the villagers.

The question that arises at this juncture is: How did the Maoists react to development policies like MGNREGA? Banerjee and Saha (2010) found very little evidence of resistance from the Maoists in the implementation of the programme. However, they did oppose the construction of roads under MGNREGA because they believed that the sole purpose of road construction was to make access to the villages easier for the security forces. But the Maoists need to realize that improved roads enable poor villagers to access distant markets for better prices, access better healthcare facilities in nearest towns, especially in case of a medical emergency, and improve children's educational outcomes in terms of increased school attendance and lower teacher absenteeism during monsoon (Bell and Dillen 2012). By opposing road construction, the Maoists are virtually depriving the poor tribals and dalits from all these benefits. They must therefore ask themselves: Can we deliver these

[39] This happened partly due to the outdated District Schedule of Rates (DSOR) and partly due to rampant corruption.

[40] "In effect, the number of days wasted at the bank and post office to get their money is creating an adverse reaction amongst villagers who are expressing their unwillingness to receive their wages under this system." (Banerjee and Saha 2010, p. 46).

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Table 5.21 State-wise left-wing extremism violence. (Source: Annual Report 2012–2013, Ministry oh Home Affairs, Government of India)

States	2009		2012	
	Incidence	Death	Incidence	Death
Andhra Pradesh	66	18	67	13
Bihar	232	72	166	44
Chhattisgarh	529	290	370	109
Jharkhand	742	208	480	163
Madhya Pradesh	1	0	11	0
Odisha	266	67	171	45
Uttar Pradesh	8	2	2	0
West Bengal	255	158	6	0
Total	1099	815	1273	374

benefits to the poor villagers? However, the data say that violence due to LWE has gone down over time (Table 5.21).

5.12 Summary and Search for Better Policy to Ensure Justice to Red Corridor Region

Our results show that the Red Corridor region is impoverished and lags behind the ROI sample region in terms of most of the development indicators considered in this chapter. The poor households, mostly tribals and dalits[41] dwelling in the Red Corridor region, continue to languish when the plight of the rest of the Indians has been gradually improving. The tribals and the dalits of the Red Corridor region failed to participate effectively in India's growth process. Our results show that the Red Corridor region has a substantial tribal population. The State has to recognize that they need special attention and support. According to Guha (2007, p. 3311), "On the government side, this might take the shape of a sensitively conceived and sincerely implemented plan to make *adivasis* true partners in the development process." A "security-centric" approach of deploying paramilitary forces in the Red Corridor region alone cannot yield the desired results. The State has to adopt an "ameliorative approach" to win the faith of the tribals and the dalits. Realizing this, the State implemented various schemes, programmes and enacted laws for holistic socioeconomic development of the Red Corridor region which did not receive adequate attention of the development policy planners earlier. However, persistent

[41] We also recognize the fact that tribals and dalits are not homogeneous groups. But in the absence of any caste census or secondary data from other surveys specifically targeting these two groups, we could not do more detailed analysis for the two groups separately. This chapter looks at average outcomes across districts in the two regions and hence group-level analysis or intra-district analysis is beyond the purview of this study.

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confrontation between the State and the Maoists is thwarting the development process. "There is thus a double tragedy at work in tribal India. The first tragedy is that the State has treated its *adivasi* citizens with contempt and condescension. The second tragedy is that their presumed protectors, the Naxalites, offer no long-term solution either."[42] Both the central and the state governments have to work in tandem with each other for better social integration of the Red Corridor region with the ROI.

One main limitation of our study is that it is cross-sectional and hence does not capture the dynamic patterns of growth and development in the Red Corridor region vis-à-vis the ROI. Simple mean tests did not allow us to control other potential factors having a bearing on average outcomes. Availability of a longitudinal dataset on development indicators at the district level would allow us to control other covariates when we compare a single development indicator between the two groups: the Red Corridor region versus the ROI. Again, due to non-availability of data on most of the development indicators and per capita income prior to 1999 at the district level, we could not undertake a more rigorous and robust econometric analysis to examine the interplay between growth and development in the Red Corridor region. In future, when data from Census 2011 become available, further research can be done to examine the dynamics of deprivation and impoverishment of the Red Corridor region. Such analysis can also bring out convergence or divergence of regional disparity over time.

Based on our study findings, a brief discussion on the key policy aspects of a "multipronged approach"[43] towards holistic development (e.g. launching of IAP) seems warranted at this point. Our results show that the region suffers from inadequate health infrastructure (e.g. hospitals and dispensaries, PHC, etc.). Hence, the government has to allocate sufficient funds for making health infrastructure available to them. Special provisions must be made under the National Rural Health Mission (NRHM), implemented since 2005, for this region. The State has to ensure that other components of the NRHM, namely, providing safe drinking water, sanitation facility, etc., are implemented speedily in this region. If needed, the State should explore the possibility of making provisions under public–private-partnership (PPP) model. For example, many corporate houses like Hindustan Unilever Limited, ITC Limited, etc. have widespread distribution networks even in the remotest villages in India. These networks can be effectively used to create awareness about health and for providing certain essential services like safe drinking water, vaccination, health camps, etc. These strategies can go a long way in improving health outcomes of the region. We found evidence of the Red Corridor region lacking access to secondary and senior secondary schools and also lagging behind in terms of literacy and the school enrolment rate. Hence, the State has to improve availability of the education infrastructure by building more secondary and senior secondary schools. Also, building vocational schools and schools imparting other livelihood skills should be given more importance. To boost the literacy rate, besides the *Sarva Shiksha*

[42] See Guha (2007, p. 3311).

[43] See Editorial (2008, pp. 5–6).

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Abhiyan (SSA), the State has to launch special adult literacy programmes. In recent times, the government has emphasized financial inclusion. Our findings show that households residing in the Red Corridor region had low availability of all types of financial institutions considered: commercial banks, cooperative banks, agricultural credit societies. However, one of the main objectives of bank nationalization in the 1960s was to expand the outreach of bank branches in backward areas. But our results on financial accessibility present a somewhat grim picture. Therefore, the government can promote micro-credit programmes and other self-help-group (SHG)-led financial inclusion drives in the Red Corridor region. The State has to give special attention to rural electrification and better road connectivity. Launching of schemes like the *Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY)* for augmenting power supply in rural areas and *Pradhan Mantri Gram Sadak Yojana (PMGSY)* for building all-weather roads are certainly laudable steps taken by the State in these directions. Effective implementation of these programmes will significantly improve living conditions and market access of backward regions like the Red Corridor region. We also found that a significant proportion of workers in the Red Corridor region were marginal workers. This is due to very limited employment and livelihood earning opportunities in the region. Hence, effective implementation of the MGNREGA can create employment opportunities for the poor tribals and dalits of the Red Corridor region, especially during the lean season. Also, the State should provide meaningful alternative livelihood support to the tribals under the National Rural Livelihood Mission (NRLM) so that the tribal households' dependence on forest resources is reduced. The State can also form a separate body similar to the National Skill Development Council (NSDC) dedicated solely to skill development of the tribal youth population under the Ministry of Tribal Affairs. The objective of the said body would be to identify livelihood skills suitable for imparting amongst tribal youth and to help them in getting employment and/or support financing for self-employment. Finally, to improve housing conditions, the State must ensure that the physical targets of the *Indira Awaas Yojana* (IAY) are met as far as possible in the Red Corridor region. Successful implementation of the above-mentioned schemes will certainly make a dent into poverty alleviation and will ameliorate the misery of the have-nots of the Red Corridor region.

The success of a programme depends crucially on proper implementation and monitoring. Our earlier discussion on efficacy of government programmes shows that often the benefits of the programme do not accrue to the intended beneficiaries. The government has to ensure that the benefits of the development programmes reach the poor tribals and dalits who hitherto have remained deprived. Proper implementation can be ensured through decentralized planning and by involving local people in decision-making. Social audit at regular intervals must be an integral part of the system of monitoring and programme evaluation. The recent announcement of Prime Minister's Rural Development Fellows[44] (PMRDF) initiative for the IAP districts by the union minister of rural development Mr. Jairam Ramesh is a welcome step to strengthen the service delivery to the intended beneficiaries.

[44] For more details see http://rural.nic.in/pmrdfs/.

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Moreover, in these backward areas the villagers' awareness about government programmes and their basic rights is very low. Banerjee and Saha (2010) found that most villagers in their study areas did not know that MGNREGA is an Act and not a scheme. Therefore, on the one hand, the State has to improve transparency in implementation through better governance, and, on the other, it has to create better awareness amongst the tribal and dalit population about various schemes and Acts.

Mao Tse Tung once said, "If we attend to these problems, solve them and satisfy the needs of the masses, we shall really become organizers of the well-being of the masses, and they will truly rally round us and give us their warm support…. I earnestly suggest to this congress that we pay close attention to the well-being of the masses, from the problems of land and labour to those of fuel, rice, cooking oil and salt. The women want to learn ploughing and harrowing. Whom can we get to teach them? The children want to go to school. Have we set up primary schools? The wooden bridge over there is too narrow and people may fall off. Should we not repair it? Many people suffer from boils and other ailments. What are we going to do about it? All such problems concerning the well-being of the masses should be placed on our agenda."[45] It is high time that all the stakeholders should also ponder over these issues and evaluate their capabilities to deliver the same. Above all, at policy level, justice needs to be done in these affected areas and the people by ensuring the right to live with dignity and by ensuring their voices in the policy process. Otherwise, the plight of our deprived tribal and dalit population will never improve, and they have to accept injustice and underdevelopment as a *fait accompli*.

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[45] As spoken while delivering the concluding speech at the Second National Congress of Workers' and Peasants' Representatives held in China in January 1934. (See http://www.marxists.org/reference/archive/mao/selected-works/volume-1/mswv1_10.htm. Accessed 12 Aug 2012).

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UNCORRECTED PROOF

Author's Proof

Chapter 5: Author Query

AQ1. “Debroy and Bhandari (2003)” was changed to “Debroy (2003)” to match the reference list. Please confirm or correct the change.

AQ2. The following authors are cited in the text but are not given in the reference list: “Subramanian (2005)”, "World Development Indicators (2012)" and “Navlakha (2010)”. Please provide full references.

AQ3. Please provide the significance value of b in Table 5.6.

AQ4. Please provide placement of table footnote “b” and “c” in Table 5.7.

AQ5. Please provide placement of “a” in Table 5.9.

AQ6. Please provide significance of “c” in Table 5.20.

AQ7. Please specify whether the year “2006a” or “2006b” is valid for the citation “Navlakha (2006)”.

AQ8. Please specify whether the year “2010a” or “2010b” is valid for the citation “Subramanian (2010)”.

AQ9. Following references are not cited in the text “Burgess and Pande 2004”, “Planning Commission 2010” and “Rosenzweig 1990”.Please provide the reference of delete the entry from the reference list