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## **The Red Corridor Region of India: What Do the Data Tell Us?**

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# **The Red Corridor Region of India: What Do the Data Tell Us?<sup>1</sup>**

Jyoti Prasad Mukhopadhyay<sup>2</sup> and Nilanjan Banik<sup>3</sup>

**Abstract:** In this paper we analyze why Naxalism (an ultra-left movement) still persists in pockets of India. One popular perception about the existence of Naxalism is deprivation. We examine 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. We examine the hypothesis whether people living from rest of India has a better living standard in comparison to people living in the Red Corridor region (areas affected by Naxalism). We find evidence that Red Corridor region is deprived in comparison to rest of India.

**Key words:** Naxalism, Deprivation, Paired t-test.

**JEL Classification:** O11, C10.

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## Introduction

Of late, India has experienced an upsurge in Maoist activity and related insurgency in the Red Corridor region<sup>4</sup> of India. 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 para-military 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 Maoists. Social researchers view this rise of Maoism 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 (D. S. Tendulkar 2010; Nilanjan Banik 2009), socio-demographic disparity (J.N. Kurian 2000), poverty (C.Purfield 2006), institutions (K. Kochar *et al.* 2006), and deprivation (B.Debroy and L. Bhandari 2003). Each of these issues has received considerable media (both print and electronic) attention under the garb of Naxalism<sup>5</sup>, inclusive growth, and corruption. Tendulkar (D. S. Tendulkar 2010) admits that during the Eleventh Five Year Plan (2007-12) 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<sup>6</sup> (Nilanjan 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 (J. N. Kurian 2000). In a similar vein, C. Purfield conducts a state level analysis and finds that the richer states have been more successful

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<sup>4</sup> The Red Corridor is a region comprising parts of Andhra Pradesh, Bihar, Chattisgarh, Jharkhand, Madhya Pradesh, Odisha, Uttar Pradesh and West Bengal with considerable Naxalite activities.

<sup>5</sup> 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.

<sup>6</sup> 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.

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 sub-regional (district) level, B. Debroy and Bhandari identify the most backward districts benchmarking them on the attainment of Millennium Development Goals (set by UNDP) across six measures of socio-economic progress: poverty, hunger, literacy, immunization, infant mortality and elementary enrolment. They find 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 (B. Debroy and L. Bhandari 2003).

The upshot of this brief literature review is that pockets of deprivation exist. The market is still not perfect,<sup>7</sup> and there are ways to increase overall productivity through making the market work for the poor and deprived. Imperfection in labour<sup>8</sup> and capital market affects<sup>9</sup> 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, (P. Romer 1990; N. G. 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 as better access to health and education – not otherwise considered in the

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<sup>7</sup> 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.

<sup>8</sup> The labour market is not perfect because of discrimination and reservation on the basis of caste, religion, and gender.

<sup>9</sup> Under perfect capital market conditions anyone with profitable investment opportunity will be able to either borrow money to finance it, or to sell equity in a firm set up to undertake it.

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 makes the difference. Poor quality (of roads, electricity supply, etc.), and an inefficient delivery system of services such as education and healthcare, 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 need 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.”<sup>10</sup>

In this chapter we will focus on Naxalism, and the reasons for its persistence and spread. One popular notion in India is that the Red Corridor region of India is one of the most backward. Socio-economic development of the region has been abysmal since independence. As a result, the Maoists have been able to win the confidence of the

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<sup>10</sup> “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](http://planningcommission.nic.in/reports/publications/rep_dce.pdf) accessed on Jan 30, 2012.

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 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; access to finance; access to communication and other basic amenities; nature of work participation; the living standard; and poverty. Our results show that the Red Corridor region is indeed impoverished in comparison to the rest of India (henceforth, ROI) in terms of most of the indicators of well-being considered in this chapter. The rest of the chapter is organised as follows. In section 2 we focus on macro-level factors (such as income inequality) which might have been responsible for the genesis of Naxalism in the Red Corridor region. In section 3 we focus on some micro-level factors such as deprivation in terms of standard development indicators. Section 4 presents the methodology and results. In section 5 we discuss government interventions to combat Naxalism. Section 6 concludes our study.

### **Unequal Income Distribution**

According to K. S. 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.<sup>11</sup> Although there were a few reforms initiated during the early eighties, the all-encompassing process of reforms started in 1991.<sup>12</sup>

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 per cent. During the Eighth Five Year Plan (1992-1996) the GDP growth rate has increased to 6.5 per cent, and during the Tenth Five Year Plan (2002-2006) the GDP growth rate has further increased to 7.7 per cent (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 \$ 215 during 1975 to \$ 293 during 1988, and further to \$ 1140 during 2009 (World Development Indicators, 2012). Likewise, the poverty number (measured in terms of headcount ratio)<sup>13</sup> declined from 36 per cent in 1993-94 to 27.5 per cent in 2004-05.<sup>14</sup> Measured by these numbers, broad-based 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.

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<sup>11</sup> In March 2012, Maoists abducted two foreign nationals in Odisha. In the very next month, in Chattisgarh, 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.

<sup>12</sup> Reforms mean policies adopted by the Central Government to promote globalization and liberalization.

<sup>13</sup> HCR is measured as proportion of the population living below the poverty line. India's official poverty lines in 1993-94 were Rs 205.84 and Rs 281.33 for rural and urban India, respectively. In 2004-05, poverty lines were Rs 356.30 and Rs 538.60 for rural and urban India, respectively.

<sup>14</sup> Ministry of Rural Development, Government of India.

Looking at the share of sectoral GDP, we find that the share of agriculture in national income has fallen from 56.90 per cent during 1950-51 to 14.6 per cent during 2009-10. On the other hand, share of the services sector in national income has increased from 29.80 per cent during 1950-51 to 57.2 per cent during 2009-10. The share of the manufacturing sector has remained more or less constant at around 27 per cent 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 per cent of the Indian population earns their livelihood from agricultural, and agriculture-related allied activities, compared to less than 10 per cent 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 Rs 100 then agricultural and allied activities are contributing 14.6 per cent of the national income, that is, Rs 14.6, in comparison to Rs 57.2 generated by the services sector. Income inequality becomes evident as it is like distributing Rs 14.6 to around 57 people, as compared to distributing Rs 57.2 to less than 10 people. What is more worrying is that this inequality is going to rise rapidly. Going by 2009-10 data agricultural sector is growing at an annual rate of 1.7 per cent in comparison to services growing at a rate of 8.7 per cent. 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<sup>15</sup> (CV) we find that it is the highest for the agricultural sector in comparison to industry and services (see Table 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 earning. Besides, uncertainty associated with volatile income causes migration. As ‘expected’ return in the urban sector (dominated by the services

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<sup>15</sup>  $CV = (\text{standard deviation} / \text{mean}) \times 100$



sector) is higher than ‘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 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 north-eastern 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).<sup>16</sup> 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 9,300 in 2004-05 to 10,500 in 2005-06. Reports suggest they have a 25,000-member people’s militia and 50,000 members in village-level units.”<sup>17</sup>

According to the MHA, the left-wing extremism has spread its tentacles across several states in varying intensities. States which are severely affected by the movement are: Chhattishgarh, Jharkhand, Odisha and Bihar. Andhra Pradesh, West Bengal and Maharashtra are partially affected by Naxalism. Uttar Pradesh and Madhya Pradesh are

<sup>16</sup> For a detailed historic account of the Maoist movement in India see IDSA Occasional Paper No 20 by P.V. Ramana (2011), S. Banerjee (1980) and P. Singh (2006)

<sup>17</sup> See G. Navlakha (2006, p. 2186)

the states marginally affected by Maoism (see Figure 1). R. K. Kujur (Kujur 2009) gives a brief account of Maoist violence in these states during 2008. Table 2 shows the extent of Naxalite violence in the Red Corridor region during 2007-2011. From Table 2 in the Appendix 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.

### **Going Beyond Income: Some Stylized Facts**

India's Prime Minister Dr. Manmohan Singh has said that Maoism or Naxalism is the "the single biggest internal security challenge ever faced by our country."<sup>18</sup> The Ministry of Home Affairs (MHA) describes Maoism as "a doctrine to capture State power through a combination of armed insurgency, mass mobilization and strategic alliances."<sup>19</sup> 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 in India. Socio-economic development of the region has been very 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

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<sup>18</sup> "Ending the Red Corridor", *The Economist*, February 25, 2010.

<sup>19</sup> See Frequently Asked Questions (FAQ) at <http://mha.nic.in/pdfs/NM-FAQ.pdf> (Accessed on February 23, 2012)

whatsoever to doctors and clinics.”<sup>20</sup> 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<sup>21</sup> in the Indian Constitution to safeguard interests of the tribals towards the bigger objective of achieving socio-economic 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 (R. K. Kumar 2009). “[T]hey have been unable to effectively articulate their grievances through the democratic and electoral process.”<sup>22</sup> Lack of land reforms; displacement of tribals from their traditional lands due to industrial expansion; indiscriminate extraction of minerals results in environmental degradation and affects tribal life adversely; rapid disappearance of Common Property Resources (CPR) etc. are the key reasons for increasing resentment amongst the tribals. These poor tribals typically depend on forest resources for livelihood. For example, 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.”<sup>23</sup> 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.”<sup>24</sup>

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 S. Banerjee (S. Banerjee 2008: p.11), “the dalits suffer from various types of disadvantages

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<sup>20</sup> See R. Guha (2007, p 3306)

<sup>21</sup> Articles 244, 244A, 275(1), 342 and 339

<sup>22</sup> See R. Guha (2007, p 3305)

<sup>23</sup> See K. S. Subramanian (2010, p 25)

<sup>24</sup> See H. Kumar (2009, p 12)

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 (S. 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 (R. Guha 2007; N. Mukherji 2010; G. Navlakha 2010).

From our discussion so far one might conclude that a high proportion of dalits and tribals in the 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.”<sup>25</sup> 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.

### **The Red Corridor region vis-à-vis Rest of India**

We examine 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 rest of India (ROI). We examine this hypothesis by analyzing whether the average outcomes of the Red Corridor

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<sup>25</sup> See Development Challenges in Extremist Affected Areas (2008), p 3.

region based on the seven development indicators are statistically significant or are worse than those of the regions with no history of Maoism, i.e. the ROI.

### ***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.<sup>26</sup> 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<sup>27</sup> nationwide by the International Institute for Population Sciences (IIPS) Mumbai, in 2007-08. Data on per capita income (PCI) is taken from various reports published by the Planning Commission of India. Data on district-level poverty measured by the headcount ratio (HCR) is taken from Chaudhury and Gupta (S. Chaudhury and N. Gupta 2009)<sup>28</sup>.

### ***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 3. These districts are selected from the list of districts identified for the implementation of the Integrated Action Plan (IAP).<sup>29</sup> The comparison districts<sup>30</sup> from the ROI are selected from five<sup>31</sup> states: Gujarat,

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<sup>26</sup> We extensively used the Village Directory of the respective districts available from Census 2001.

<sup>27</sup> The survey was funded by Union Ministry of Health and Family Welfare, United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF).

<sup>28</sup> S. Chaudhury and N. Gupta (2009) measure district level HCR based on 61<sup>st</sup> round of Consumer Expenditure Survey (CES) conducted by National Sample Survey Organisation (NSSO).

<sup>29</sup> See [http://pcserver.nic.in/iapmis/state\\_district\\_list.aspx](http://pcserver.nic.in/iapmis/state_district_list.aspx)

<sup>30</sup> 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 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.

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 are selected on the basis of per capita income (PCI) in 1999.<sup>32</sup> The districts of each of these five states are sorted in descending order in terms of PCI in 1999 and then top four, middle four<sup>33</sup> and bottom<sup>34</sup> four districts are selected from the sorted list. Thus, in the sample, a total of sixty and fifty-five districts are taken from both Red Corridor region and the ROI respectively.

The following dimensions of development are considered in the analysis:

- i) 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.
- ii) Access to education and educational outcome – availability of educational institutions; distance from educational institution; school enrolment rate and literacy rate.
- iii) Access to finance – availability of financial institutions, distance from financial institutions.
- iv) Access to communication and other basic amenities – electricity, post-office, distance from post office, distance from bus and railway services, average distance from the nearest town, access to paved road and mud road.
- v) Nature of work participation – marginal workers, main workers and agricultural workers (all as a percentage of total workers), workforce participation rate.
- vi) Living standard: Proportion of household living in pucca houses

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<sup>31</sup> We limit our analysis to five states for convenience.

<sup>32</sup> For Gujarat due to non-availability of data on PCI in 1999 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.

<sup>33</sup> 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.

<sup>34</sup> Selection of districts from the middle of the distribution might not change the average outcomes significantly.

#### vii) Poverty – Headcount Ratio (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<sup>35</sup> 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.

### ***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 4 it is evident that Red Corridor region has a higher proportion (27.39 per cent) of tribal (ST) population compared to our ROI sample (11.37 per cent). However, as Table 4 shows, the Red Corridor region has a relatively lesser proportion (15.74 per cent) of dalits (SC) population compared to our ROI sample (19.48 per cent).<sup>36</sup> Table 5 shows that this difference is statistically significant as well. Also, from Table 5 we can see that Red Corridor region has higher proportion of the average land covered by forest (120191 sq. km) as compared to the ROI sample (61300 sq km). Large forest lands are often used by the Maoists as hideouts to evade arrest and to organize armed struggles against the State. Table 4 also shows intra-group variation (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).

### ***Access to Health, Health Outcome and Awareness***

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<sup>35</sup> 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 non-parametric tests which gave qualitatively similar results.

<sup>36</sup> 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.

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 sample (see Table 4). Table 6 shows that this unequal access is also statistically significant (t-statistic = 3.0). The Red Corridor region lacks access to health facilities not only in terms of hospitals and dispensaries but also in terms of the number of health centres and community health workers. All the t-statistics except for registered medical practitioners reported in Table 6 are statistically significant in terms of the level of significance at 5 per cent. Apart from availability, distance from the health facilities also matters. If the health centre is far away then poor households have to incur higher cost even for minor health checkups, and that acts as a deterrent to accessing health services. Table 7 shows that approximately 38 per cent of the Red Corridor district's population as compared to 22 per cent of the population of our ROI sample districts had access to a primary health centre (PHC) which was at a distance of 10 km or more and this difference is statistically significant (t-statistic = -6.30). Average health outcomes of the districts in Red Corridor region are more appalling compared to the ROI sample. The average IMR of the Red Corridor region was 65.38 in 2001 and the same for the ROI sample was 53.65 (see Table 8). Average LEB figures were 62 years and 65 years for the Red Corridor region and the ROI sample respectively. Differences in these health outcomes are statistically significant as well (t-statistics are -2.50 and 2.41 for IMR and LEB respectively). Using data from the DLHS survey we examine whether there was any sign of improvement in health accessibility at least at the village level in 2007-08. In Table 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 don't find any statistically significant difference in the mean accessibility at the village level.

### ***Access to Education***

From Table 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 10 we can see that this difference is not statistically significant (t-statistic = -0.26). However, when it comes to higher levels of school education (secondary and senior



secondary) the Red Corridor region has much lower access in comparison to the ROI. There were 8.78 secondary schools per one lakh population in the Red Corridor region as compared to 13.47 secondary schools per one lakh population of the ROI sample (see Table 10). The Red Corridor region had similar low accessibility to senior secondary schools as well. However, on the contrary, the Red Corridor region had a higher number of colleges (0.73) per one lakh population compared to the ROI sample (0.37) but this difference is not statistically significant (p-value is high). Distances from educational institutions also determine accessibility and educational outcomes. If schools are far then it takes more time for the kids to reach schools and often non-availability of paved roads poses a serious problem in reaching schools during the rainy season. This can adversely affect educational outcomes; e.g. school attendance. However, as Table 11 shows, there is no statistical difference at the 5 per cent 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 12). Average school enrolment rates were 41.80 per cent and 52.95 per cent 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 per cent) as compared to the ROI sample (68 per cent). 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.

### **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 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 13). In 2001, districts belonging to the Red Corridor region on an average had 27 per cent households with a bank account while sample districts from the ROI had around 39 per cent 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 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. 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 14 shows that nearly 48 per cent of the population in the Red Corridor districts had to travel more than 10 km to access a cooperative bank compared to only 26 per cent in the ROI in 2001. This difference in accessibility in terms of distance is highly significant at any conventional level of significance.

### **Access to Communication and other Basic Amenities**

Access to certain basic amenities (e.g. electricity) and communication services or facilities enhances quality of life. S. R. Khandker et al. (S. R. Khandker et al. 2012) show that rural electrification positively affects rural poverty alleviation. In 2001, only 28 per cent 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 per cent (see Table 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 16 shows that in the Red Corridor region, approximately 13 per cent of the population had access to a post office within a

range of 5-10 km while about 5 per cent had access to a post office within the same distance range for the ROI sample.

Better access to road connectivity has several positive effects (C.Bell and S. V. 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 healthcare, get timely treatment, reducing the morbidity rate. In 2001, only 45 per cent of the population in the Red Corridor districts on an average had access to a paved road while 62 per cent of the population in the ROI had access to the same facility (see Table 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 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 per cent and 2 per cent of the population respectively in the Red Corridor districts and the ROI sample districts had access to bus services but at a distance exceeding 10 km (see Table 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 per cent of the population in the Red Corridor region had to travel more than 10 km to avail railway services but only around 50 per cent of the population in the ROI sample had to do so and this difference in accessing railway services is statistically significant at 5 per cent level of significance.

### **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 six months (less than six months) during the reference period (usually one year). From Table 17 it is evident that in the Red Corridor region, on an average a higher proportion (32 per cent) of the workers were marginal workers as compared to the ROI sample (22 per cent), and the difference is statistically significant (t-statistic = -4.53). The Red Corridor region also had a statistically significant higher proportion of workers (35 per cent) engaged in agricultural work as compared to the ROI sample (18 per cent). Finally, the average work force 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 per cent) for the Red Corridor districts as compared to the ROI sample districts (44 per cent). This difference in work force participation rate is also found to be statistically significant at 10 per cent level of significance.

### **Living Standard**

We consider the type of housing viz. pucca house as a proxy for standard of living. Table 18 shows that only 16 per cent 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 per cent) 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 the ROI is highly statistically significant. This implies that significant disparity exists in the average standard of living in the Red Corridor region vis-à-vis the ROI.

### **Poverty**

From Table 19 it is evident that a large proportion (39 per cent) of the population in the Red Corridor districts lived below the poverty line (BPL) as compared to the proportion (16 per cent) of people in the ROI sample districts in 2004. The difference in the average poverty outcomes is also highly statistically significant (p-value is low). This high rate of poverty in the Red Corridor region is not surprising given the degree of deprivation of the region in terms of other development indicators previously discussed.

### **Is There Hope?**

The Registrar-General of India, recently released house listing data from the Census 2011. The data is available at the district level for the Indian states. Hence, we also analysed the data for some of the development indicators for our sample districts to examine whether the development gaps between the Red Corridor region and the ROI are persisting or narrowing down over the decade, 2001-2011. In other words, our objective was to examine whether there was any sign of improvement in the development scenario in the Red Corridor region vis-à-vis the ROI sample districts. We specifically examined access to banking (percentage of households having bank accounts) and the following indicators of living standard: percentage of households with electricity connection, percentage of households residing in houses with cemented floors, percentage of households residing in houses with concrete roofs, and percentage of households living in houses with walls made of grass/thatch/bamboo/plastic or polythene. From Table 20, it is evident that access to banking services shows a marked improvement in the Red Corridor region. The percentage of households with bank accounts increased from 26 per cent to 49 per cent between 2001 and 2011 in the Red Corridor region. However, the gap in access to banking between Red Corridor region and the ROI sample over the decade 2001-2011 has increased 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 per cent to 4.44 per cent. However, in the ROI sample districts the same figure fell to 2.7 per cent in 2011 from 3.12 per cent in 2001.

### **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 (G.Navlakha 2006; H. Kumar 2009). According to K. S.Subramanian (K. S. 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 (K. S. Subramanian 2010).

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<sup>37</sup> (G. Navalakha 2006; P. Singh 2006). On the other hand, recognizing the development gaps in the Red Corridor region, the government adopted a number of programmes to improve the socio-economic situation. In Box 2 we discuss very briefly the main programmes,<sup>38</sup> and policies initiated by the government to accelerate holistic development of the region.

### **Box 2: Development Programmes Initiated by the Government**

**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.

<sup>37</sup> One main pre-condition 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 on Mar 3, 2012).

<sup>38</sup> 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.

**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.

**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 hundred backward districts of which thirty- two were affected by Left Wing Extremism (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<sup>39</sup> which comprised the value of output per agricultural worker, agricultural wage rate, and proportion of Scheduled Caste (SC) and Scheduled Tribe (ST) in the district population. Effective coordination between the Centre and the state governments is crucial for the success of this type of schemes.

**iv) *Backward Region Grant Fund (BRGF)***<sup>40</sup> – This programme was launched by the Ministry of Panchayati Raj in 2006-07 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)***<sup>41</sup> – This scheme was launched under the BRGF programme for 82 selected tribal and backward districts of India. The implementation period of the scheme was 2010-11 and 2011-12 and a sum of Rs 25 crores and Rs 30 crores respectively were sanctioned for each year for each district. The objective of

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<sup>39</sup> Each of the parameters was given equal weights in the computation of the index.

<sup>40</sup> For more details about the scheme visit: <http://www.nird.org.in/brgf/index.html>

<sup>41</sup> For more details about the scheme visit: <http://pcserver.nic.in/iapmis/login.aspx>

the scheme was to build public infrastructure and provision 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 73<sup>rd</sup> 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 mis-utilization of funds. For instance, according to the RSVY evaluation study report (2008) commissioned by the Planning Commission, 37 per cent of the RSVY funds was originally proposed for agricultural improvement in Bastar district in Chhattisgarh but only 24 per cent was actually spent for such a purpose. The figures for addressing unemployment of the same district were even more dismal (37 per cent proposed and 13 per cent were actually utilized). Even benefits of existing employment generation programmes like MGNREGA do not accrue in its entirety to the poor beneficiaries. A study conducted by K. Banerjee and P. Saha (2010) in the Red Corridor region to evaluate the impact of MGNREGA on poor households' livelihoods found that *de facto* the average man-days 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<sup>42</sup> 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

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<sup>42</sup> This happened partly due to the outdated District Schedule of Rates (DSOR) and partly due to rampant corruption.



the bank accounts.<sup>43</sup> 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. K. Banerjee and P. Saha (K. Banerjee and P. 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 MGNREGA? K. Banerjee and P. Saha (K. Banerjee and P. 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 should also 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 (C. Bell and S. V. 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 benefits to the poor villagers?

## **Conclusion**

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<sup>44</sup> dwelling in the Red Corridor region

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<sup>43</sup> "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." (K. Banerjee and P. Saha, 2010, p 46)

<sup>44</sup> 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.

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 R. Guha (R. 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 socio-economic development of the Red Corridor region which did not receive adequate attention of the development policy planners earlier. However, persistent 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."<sup>45</sup> 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 becomes available, further research can be done to examine the dynamics of

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<sup>45</sup> See R. Guha (2007, p 3311)

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 aspects of a “multi-pronged approach”<sup>46</sup> towards holistic development (e.g. launching of Integrated Action Plan) 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 corporates 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, beside the Sarva Shiksha 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 1960s was to expand the outreach of bank branches in backward areas. But our results on financial

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<sup>46</sup> See “Widening Debate on the Naxalite Movement”, *Economic and Political Weekly*, 43 (19), 2008, pp 5-6.

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 Mahatma Gandhi National Rural Employment Guarantee Act (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 among 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<sup>47</sup> (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. Moreover, in these backward areas the villagers' awareness about government programmes and their basic rights is very low. K. Banerjee and P. 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 among 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."<sup>48</sup> It is high time that the Maoist leaders should also ponder over these issues and evaluate their capabilities to deliver the same. Otherwise the poor tribals' and dalits' plight will never improve and they have to accept underdevelopment as a *fait accompli*.

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<sup>47</sup> For more details see <http://rural.nic.in/pmrdfs/>

<sup>48</sup> 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](http://www.marxists.org/reference/archive/mao/selected-works/volume-1/mswv1_10.htm). Accessed on August 12, 2012)

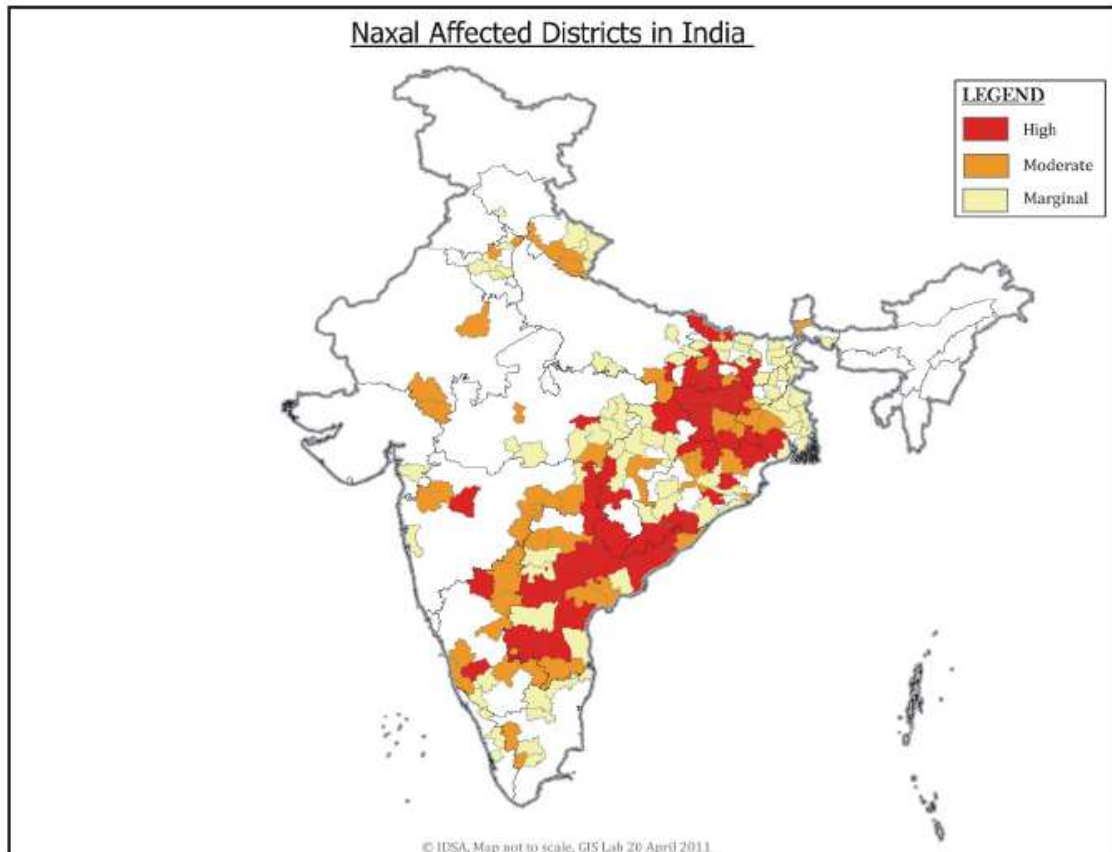
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**Figure 1: Naxal Affected Districts in India**



Source: IDSA, at : [http://www.idsa.in/system/files/OP\\_MeasurestodealwithNaxal.pdf](http://www.idsa.in/system/files/OP_MeasurestodealwithNaxal.pdf) accessed on Feb 23, 2012.



**Table 1: Sectorial Growth Rates and Other Related Statistics**

	<b>1971-72 to 1980-81</b>	<b>1981-82 to 1990-91</b>	<b>2004-05 to 2009-10</b>
<b>GDP</b>			
Growth rate (mean)	3.16	5.64	8.3
Coefficient of variation (CV)	137.75	39.05	27.14
<b>Agriculture and Allied Service</b>			
Growth rate (mean)	1.83	3.55	2.99
Coefficient of variation (CV)	475.21	150.74	162.74
<b>Industry</b>			
Growth rate (mean)	4.05	7.11	8.67
Coefficient of variation (CV)	88.91	28.22	41.85
<b>Services</b>			
Growth rate (mean)	4.42	6.72	10.05
Coefficient of variation (CV)	34.03	17.16	19.05

Source: Central Statistical Organization and Author's Own Calculation

**Table 2: State-Wise Extent of Naxal Violence during 2007-2011**

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
M.P.	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
<b>TOTAL</b>	<b>1565</b>	<b>696</b>	<b>1591</b>	<b>721</b>	<b>2258</b>	<b>908</b>	<b>2213</b>	<b>1005</b>	<b>1745</b>	<b>606</b>

Source : Ministry of Home Affairs

**Table 3: Composition of Sample: Red Corridor Districts and Districts from Rest of India (ROI)**

<b>A. Districts of red Corridor region (N = 60)</b>	
<b>State</b>	<b>Districts</b>
Andhra Pradesh	Adilabad, East Godavari, Karimnagar, Khammam, Srikakulam, Visakhapatnam, Vizianagaram, Warangal
Bihar	Arwal*, Aurangabad, Gaya, Jamui, Jehanabad, Kaimur, Munger, Nawada, Rohtas
Chhattishgarh	Bastar, Bijapur*, Dantewada, Jashpur, Kanker, Koriya, Narayanpur*, Rajnandgaon, Surguja
Jharkhand	Bokaro, Chatra, Garhwa, Giridih, Gumla, Hazaribagh, Khunti*, Kodarma, Latehar*, Lohardaga, Pachim Singhbhum, Palamu, Purbi Singhbhum, Ramgarh*, Ranchi (Rural), Saraikela*, Simdega*
Odisha	Debagarh, Gajapati, Ganjam, Jajapur, Kandhamal, Kendujhar, Koraput, Malkangiri, Mayurbhanj, Nabarangapur, Nayagarh, Rayagada, Sambalpur, Sundargarh
West Bengal	Bankura, Medinipur (West), Puruliya
<b>B. Sample districts from the rest of India (ROI) (N = 55)</b>	
<b>State</b>	<b>Districts</b>
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* (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).

*Note:* Per-capita income (PCI) of the districts from the rest of India in 1999 is indicated in parenthesis. Figures are in thousand rupees. \*- districts created newly in 2001 or later.

**Table 4: Summary Statistics**

	<b>Min</b>	<b>Max</b>	<b>Mean</b>	<b>SD</b>	<b>N</b>
	<b>SC Population (% of total population)</b>				
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
	<b>ST Population (% of total population)</b>				
Red Corridor region	0.08	79.9	27.39	24.1	52
Rest of India sample	0	83.8	11.37	22.4	54
	<b>Forest Land (in sq km)</b>				
Red Corridor region	272	485928	120191	110803	52
Rest of India sample	0	415451	61300	79330	53
	<b>No. of hospitals and dispensaries<sup>#</sup></b>				
Red Corridor region	1.15	18.12	5	3.58	52
Rest of India sample	0.82	90.29	11	14.47	54
	<b>No of health centres<sup>#</sup> (Health centre +PHC+ PH Sub centre)</b>				
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
	<b>Any govt. health facility (% of villages)</b>				
Red Corridor region	11.9	100	44.13	25.69	55
Rest of India sample	3.6	96.2	48.63	16.86	55
	<b>IMR</b>				
Red Corridor region	36	121	65.38	19.27	49
Rest of India sample	21	144	53.65	25.09	44
	<b>No. of primary school<sup>#</sup></b>				
Red Corridor region	32.68	229.86	98.94	44.33	52
Rest of India sample	25.98	638	95.31	91.82	54
	Continued				
	<b>Literacy rate (%)</b>				
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
	<b>No. of cooperative banks<sup>#</sup></b>				
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
	<b>Household with electricity connection (%)</b>				
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
	<b>Proportion of population having access to paved road</b>				
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
	<b>Mainworkers (% of total workers)</b>				

	Min	Max	Mean	SD	N
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
<b>Head Count Ratio (HCR)</b>					
	Min	Max	Mean	SD	N
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
<b>Log (Per capita income-1999)</b>					
	Min	Max	Mean	SD	N
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

Notes: # - measured per one lakh population

Source: authors' own calculation

**Table 5: Mean Test Results of SC and ST population and forest land (sq km)**

	Mean of Red Corridor Region	Mean of ROI Sample	Test Result	N
<b>SC Population (% of total population)</b>	15.74	19.49	t = 1.34 <sup>a</sup> (0.90)	106
<b>ST Population (% of total population)</b>	27.39	11.37	t = -3.54 <sup>a</sup> (0.000)	106
<b>Forest Land (sq km)</b>	120191	61300	t = -3.12 <sup>a</sup> (0.001)	105

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

**Table 6: Mean Test Results of Access to Healthcare Facilities (2001)**

	Mean of Red Corridor Region	Mean of ROI Sample	Test Result	N
<b>No. of hospitals and dispensaries<sup>#</sup></b>	4.94	11.05	t = 3.00 <sup>b</sup> (0.001)	106
<b>No of health centres<sup>#</sup> (Health centre +PHC+ PH Sub centre)</b>	15.44	21.75	t = 2.06 <sup>b</sup> (0.02)	106
<b>No. of registered medical practioners<sup>#</sup></b>	8.40	10.36	t = 0.74 <sup>b</sup> (0.22)	106
<b>No. of community health workers<sup>#</sup> (CHW)</b>	4.77	10.64	t = 3.01 <sup>b</sup> (0.001)	106

Notes: # - measured per one lakh population

**Table 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
<b>0 &lt; distance ≤ 5 km</b>	16.48	21.39
<b>5 km &lt; distance ≤ 10 km</b>	23.77	22.28
<b>distance &gt; 10 km*</b>	37.18	22.47

Notes: \*t-test result for this category – t = -6.30 (one-tailed p-value = 0.000); d.f = 104

# - measured per one lakh population

one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 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 <sup>b</sup> (0.000)	91
HH with vaccination card (%) (2007-08)	48.88	40.51	t = -2.68 <sup>b</sup> (0.99)	109
IMR	65.38	53.65	t = -2.50 <sup>a</sup> (0.007)	93
LEB	62.93	65.20	t = 2.41 <sup>b</sup> (0.009)	90

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 9: Mean Test Results of Access to Healthcare Facilities (2007-08)**

	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 <sup>b</sup> (0.88)	110
Proportion of villages with any govt. health facility	44.13	48.63	t = 1.08 <sup>b</sup> (0.14)	110
Proportion of villages with a doctor	10.75	16.87	t = 3.15 <sup>b</sup> (0.001)	110
Proportion of villages with ASHA	57.86	38.36	t = -3.26 <sup>b</sup> (0.99)	110

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 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 <sup>#</sup>	98.94	95.31	t = -0.26 <sup>b</sup> (0.60)	106
No. of middle schools <sup>#</sup>	22.21	26.24	t = 0.93 <sup>b</sup> (0.17)	106
No. of secondary schools <sup>#</sup>	8.78	13.47	t = 2.18 <sup>b</sup> (0.02)	106
No. of senior secondary schools <sup>#</sup>	1.55	4.54	t = 3.68 <sup>b</sup> (0.000)	106
No. of colleges <sup>#</sup>	0.73	0.37	t = - 3.16 <sup>b</sup> (0.99)	106

Notes: # - measured per one lakh population

one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 11: Mean Test Results of Distance from Primary School**

<b>Proportion of population having access to primary school with</b>	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>0 &lt; distance ≤ 5 km</b>	7.26	3.72	t = -2.70 <sup>b</sup> (0.99)	105
<b>5 km &lt; distance ≤ 10 km</b>	2.16	0.19	t = -4.07 <sup>a</sup> (0.000)	93
<b>distance &gt; 10 km</b>	2.26	0.04	t = -1.56 <sup>a</sup> (0.06)	83

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 12: Mean Test Results of Educational Outcomes**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>School enrolment (%)</b>	41.80	52.95	t =6.57 <sup>b</sup> (0.000)	105
<b>Literacy rate (%)</b>	55.29	68.06	t =6.26 <sup>b</sup> (0.000)	105

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 13: Mean Test Results of Access to Finance**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>HH with bank account (%)</b>	26.67	38.68	t = 4.89 <sup>b</sup> (0.000)	105
<b>No of commercial banks<sup>#</sup></b>	3.93	5.02	t = 1.75 <sup>b</sup> (0.04)	106
<b>No of cooperative banks<sup>#</sup></b>	1.33	3.54	t = 4.82 <sup>b</sup> (0.000)	106
<b>No of agricultural credit<sup>#</sup> societies</b>	7.35	15.31	t = 3.62 <sup>b</sup> (0.000)	106
<b>No. of non-agricultural<sup>#</sup> credit societies</b>	5.51	3.38	t = -0.99 <sup>b</sup> (0.84)	106

Notes: # - measured per one lakh population

one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 14: Mean Test Results of Distance from Cooperative Bank**

<b>Proportion of population having access to cooperative bank with</b>	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>0 &lt; distance ≤ 5 km</b>	12.57	21.29	t = 3.97 <sup>b</sup> (0.000)	106
<b>5 km &lt; distance ≤ 10 km</b>	22.25	19.38	t = -1.55 <sup>a</sup> (0.06)	106
<b>distance &gt; 10 km</b>	47.56	26.21	t = -5.91 <sup>a</sup> (0.000)	106

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 15: Mean Test Results of Access to Communication and Other Amenities**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>HH with electricity connection (%)</b>	28.68	77.19	t = 12.68 <sup>b</sup> (0.000)	105
<b>No. of post offices<sup>#</sup></b>	17.03	27.36	t = 2.81 <sup>b</sup> (0.003)	106
<b>Proportion of population having access to mud road</b>	62.00	44.17	t = -3.77 <sup>a</sup> (0.000)	104
<b>Proportion of population having access to paved road</b>	45.56	62.20	t = 3.51 <sup>b</sup> (0.000)	106
<b>Avg. distance from nearest town (in km)</b>	33.15	19.42	t = -4.66 <sup>a</sup> (0.000)	106

Notes: # - measured per one lakh population

one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 16: Mean Test Results of Distance from Communication Services**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>Proportion of population having access to post office with</b>				
<b>0 &lt; distance ≤ 5 km</b>	34.11	24.01	t = -3.38 <sup>b</sup> (0.99)	106
<b>5 km &lt; distance ≤ 10 km</b>	13.04	5.35	t = -6.19 <sup>a</sup> (0.000)	106
<b>Distance &gt; 10 km</b>	4.45	1.86	t = -4.04 <sup>a</sup> (0.000)	102
<b>Proportion of population having access to bus services with</b>				
<b>0 &lt; distance ≤ 5 km</b>	21.46	10.89	t = - 5.27 <sup>b</sup> (1)	103
<b>5 km &lt; distance ≤ 10 km</b>	17.28	4.10	t = - 9.52 <sup>a</sup> (0.000)	101
<b>Distance &gt; 10 km</b>	15.10	2.37	t = - 6.74 <sup>a</sup> (0.000)	96



<b>Proportion of population having access to railway services with</b>				
<b>0 &lt; distance ≤ 5 km</b>	6.75	9.47	t = 2.42 <sup>b</sup> (0.009)	99
<b>5 km &lt; distance ≤ 10 km</b>	11.53	14.04	t = 1.66 <sup>a</sup> (0.95)	101
<b>distance &gt; 10 km</b>	67.81	50.98	t = - 3.83 <sup>a</sup> (0.000)	105

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 17: Mean Test Results of Nature of Workforce**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>Main workers (% of total workers)</b>	67.96	78.19	t = 5.44 <sup>b</sup> (0.000)	103
<b>Marginal workers (% of total workers)</b>	32.03	21.80	t = -4.53 <sup>a</sup> (0.000)	103
<b>Agricultural workers (% of total workers)</b>	35.92	18.01	t = -8.00 <sup>a</sup> (0.000)	103
<b>Workforce participation rate</b>	42.58	44.56	t = 1.47 <sup>b</sup> (0.07)	105

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 18: Mean Test Results of Quality of Housing**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test Result</b>	<b>N</b>
<b>Household staying in pucca houses (%)</b>	16.66	42	t = 7.63 <sup>b</sup> (0.000)	95

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

b - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0

**Table 19: Mean Test Results of Poverty**

	<b>Mean of Red Corridor Region</b>	<b>Mean of ROI Sample</b>	<b>Test result</b>	<b>N</b>
<b>Head Count Ratio (HCR)</b>	39.5	16.68	t = -7.12 <sup>a</sup> (0.000)	102

Notes: one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

**Table 20: Common Indicators of Living Standard between 2001 and 2011: A Comparison**

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

Notes: # - measured per one lakh population  
one-tailed p-values are in parenthesis.

H<sub>0</sub>: mean (rest of India sample) – mean (red Corridor region) = 0

a - H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) < 0

b- H<sub>a</sub>: mean (rest of India sample) – mean (red Corridor region) > 0