

## DEVELOPMENT AND CRIME IN NAXALITEAFFECTED STATES IN INDIA

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### ABSTRACT

*Naxalite movement in India is a social and political concern. The paper aims to see whether there exists any developmental disparity between Naxalite and non Naxalite affected districts of selected states in India and then it focuses on crime rates (especially on murder rates) in the study area with the hypotheses that development is more in Non- Naxal affected districts and Naxal affected districts experience significantly higher murder rate over non- Naxalite districts. Culling data from the Crime records of India, Census and District Level Household Survey, the study reveals that unlike overall crime rate there exists considerably higher murder rates in Naxal affected districts and a marked social developmental disparity between Naxalite and non- Naxalite areas. The propensity of Murder is noticeably low with lower level of urbanization, higher female- male ratio and better literacy. Social development should be prioritized in the Naxal affected districts.*

**Key word:** *Naxlite, dsrtrict level household survey, crime, development*

### INTRODUCTION

Freedom from violence is a neglected issue in development studies (Dreze and Khera, 2000) and security is believed to be one of the 'capabilities' contributing to the quality of life (Sen, 1985). Naxal movement is an internal security threat in India<sup>1</sup>. In the east-central part of this country where forests, mineral resources, watersheds, tribes overlap each other, Naxalite movement is account to this overlap. In April 1967, a tribal youth from a small village in Jalpaiguri district of West Bengal, an eastern state in India, won a case in the court regarding his right to a small piece of land occupied by the local land lord. When he went to plough his land, he was attacked by goons of land lord. This incident provoked a group led by communist and Naxalism movement started in India. The philosophy of naxalism initially was greatly inspired by the philosophies of Mao Zedong. Naxalism has gradually grown into a massive movement engulfing around 180 of India's 626 districts. Presently, Naxal activities (also termed as Left Wing Extremist Violence)

are prominently evident in seven states in India namely West Bengal, Bihar, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh, and Maharashtra. At present, they are especially concentrated in an area known as the "Red corridor"<sup>2</sup>.

In the First Five Year Plan of 1951-56, it was suggested that the planning process be initiated at the state and district levels. The first Administrative Reforms Commission (1967) stressed the need for meaningful planning at the district level, especially focusing on local variations in development patterns. Yet, since independence, the weak nature of local self-governance institutions and the growth and multiplication of sectoral and related departments favored vertical planning and obscured information on the availability of resources for a decentralized planning process in districts (Planning Commission of India, 2008a). As a consequence, many natural resource rich districts still remain impoverished, many such districts experienced channelization of resources for the sake of development of other districts and many such districts experiences displacement problems of the aboriginals associated with development projects. Naxalism, started as a protest of forceful abduction of land by the rich class in 1967 and that time it was basically a peasant and tribal protest on ownership issues of the plow land. The failure of the government to implement land reform in the expected scale was the major cause of upsurge of this movement which was supported by the then Communist Party of India. However, in course of time, the Naxalite or the left wing extremist who believed in nonviolent as well as violent means to capture political power shaped different agenda in different provinces and formed varying political parties in east- central India. Initially, Naxalites championed the causes of Tribal people against corruption. Gradually Naxalites started controlling the law and order of these areas, rejecting the efforts of the government for any developmental initiatives due to their lack of faith on government enterprise. Besides agriculture and forest products, the people of this region has little livelihood opportunities- they do not have skills to be employed in industries and manufacturing sectors situated in their own areas, local administration failed to give social security, people with vested interest are rampant- making it difficult for the governmental efforts to reach the affected people (Confederation of Indian Industry, 2010).

## **BRIEFING ABOUT THE NAXAL AFFECTED SELECTED STATES**

**Andhra Pradesh** –Naxal movement started in late sixties in the forested area of Srikakulam district of Andhra Pradesh. The present movement can be traced, to a large extent, to the establishment of the Peoples War Group (PWG) in Andhra Pradesh in 1980. Sixteen out of 23 districts are declared as Naxal affected districts in this state. Naxal politics in the state mostly revolve around rural and land related issues. At the same time, Andhra Pradesh has had a special anti-terrorist squad, trained in guerrilla warfare, called the 'greyhounds' and a well developed intelligence network that has effectively hounded the Naxals. However the need of the hour is

land reform and land distribution along with inclusive development to tackle the naxal violence in this state.

**Bihar**-The Naxalite movement in Bihar started as a movement against feudal forces. The basic demand of Naxalite movement during the early phase revolved around the issues that affected the poor and lower castes. Towards the end of 1980s, the naxal movement in Bihar took a political colour and mobilization of people took place along caste groupings. The caste dynamics also influenced the Naxalite movement since the 1980s. However, the present chief minister's initiative to recruit the Special Auxiliary Police (SAP) to fight naxal outfits has been appreciated by all especially since it has been very effective. Many other states have also decided to follow the Bihar model.

**Chhattisgarh**-Part of this region was initially used by the Government to rehabilitate refugees in the 60s, which created a lot of opposition among the tribals at that time. Prodigious extraction of minerals, political skirmishes with the local king, and continuous fights over forest and mineral rights, have provided basis for people's grouse against the government. Chhattisgarh is one of the states in India where violence has escalated sharply. In Baster Region, Naxalites have their only administration in some areas which they called 'liberated zone' where they issue vehicle passes and charge taxes from people for using the roads.

**Jharkhand**-The uniqueness of Jharkhand is that it is bound on all four sides by states that are also affected by Naxalism. Jharkhand has seen an increase in the number of incidents and number of civilian deaths in 2007. Lack of political control and inability of the government to ameliorate condition of the local people for a long time has, perhaps made it easier for the Naxals to influence economic activities in the state and obstruct operation of many mining projects.

**Orissa (hereafter called Odisha)**-The peculiar feature of the Naxalite movement in Odisha is that it is confined to the tribal areas while the coastal districts which are economically and politically more developed remained comparatively free. The population in scheduled areas is comparatively much poorer than the population in non-scheduled areas, and that Scheduled Tribes are the poorest groups. The spread of naxalism in Odisha has a clear relationship with lack of access to alternative livelihood and persistent underdevelopment of the affected regions.

**West Bengal**- The districts of Bankura, Purulia and Medinipur have been the worst affected in Naxalite violence. Poor infrastructure and underdevelopment of these vulnerable areas have been fodder to the naxalites. However, naxal spread is not just confined to these three districts. Hugli and Nadia have reported some incidents in the recent past.

## RATIONALE FOR THE STUDY

The general understanding is that, in the Naxal affected regions there would be less development and more crime and murder. As mentioned by Dutta and Zakir (2009), if development is not inclusive and people do not have the technical and vocational training to be a part of development, then development may not ensure reduction of crime rate. Interesting finding of Dreze and Khera (2000) reveals that murder rates in India bear no significant relation to urbanization and poverty, literacy rate exercises a moderating influence on criminal violence districts, while higher proportion of female population leads to lesser violence. Unlike other indicators of capability, like literacy, life expectancy, which are positively related with economic development ( in per capita income), protection from violence do not always corroborate with improvement in per capital income, as cases of violence are rising in many countries in spite of economic growth (see Glaeser, 1996; Dreze, Khera, 2000). Durkheimian model fails to predict or explain differences in crime rates by crime type. Numerous empirical studies show that development affects theft or economically motivated crimes ( Liu, 2005) positively and homicide (murder is a type of homicide) negatively (LaFree and Kick 1986). In Indian Crime records maximum share of crimes are made by 'Theft' and 'Burglary' ( 20 percent in 2001) followed by 'Hurt'(15 percent in 2001). Murder accounts only 2 percent of all crimes in 2001.

Like China, India is also experiencing economic reforms since 1990s and India has emerged as one of the promising superpowers of the world. However, at the same time, naxal movement has also become an internal security threat and in many states it is on rise, disrupting the holistic development and peace. Unlike China (Zhang 2008), there are few attempts made to analyze crime data in India. Dreze has done analysis of crime in the perspective of gender issues in India based on 1981 data. Nayar(1975) pointed out that district level data may provide more satisfactory results in socio-economic correlates of violence and crime, yet '*noone seems to have pursued this useful hint*' as opined by Dreze and Khera in 2000. The work of Borooah (2008) is appreciable as he tried to explain the rationale for existence of Naxalism in certain districts of India by applying econometric analysis. So, whether total crime (which includes all crimes recorded in Indian Penal Code) and murder in particular will be higher in Naxal affected areas is a matter of inquiry. The objective is to see firstly the situation of overall crime in naxal and non-naxal districts of selected states; secondly, to show the level of development (social, economic and infrastructural) of the districts and whether naxal affected districts are significantly worse off than the non- naxal districts in development parameters; thirdly, to look into the determinants of crime and murder. To mention here, Ministry of Home Affairs of Government of India has clearly marked the partially or fully affected Naxal affected districts in its annual reports (2005,

2008). We have tried to highlight on two issues: first, the level of crime (and Naxal violence) and developmental situation of selected six states namely Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal where some districts are Naxal affected and secondly, to find out the association of development indices with crime and especially with murder, as the latter is a well documented crime (Dreze and Khera, 2000). Two hypotheses to be tested are: development is significantly more in non- Naxal affected districts and propensity of murder is markedly more in Naxalite part.

## DATA AND METHODS

The paper draws data from multiple sources like census of India 2001, District Level Household and Facility Survey (2007-08) , Crime in India ( 2001 to 2009)<sup>3</sup>from National Crimes Record Bureau (NCRB) of the Ministry of Home Affairs (MHA), Government of India. Naxalite affected district are delineated by Ministry of Home Affairs (MHA), Government of India (2008). Out of 23 districts in Andhra Pradesh, 16 are affected by Naxal activities; in Bihar, 17 are Naxalite affected districts out of 37, in Chhattisgarh half of the districts are of this category. Like Andhra Pradesh, in Jharkhand too, majorities are (13 out of 18 districts) Naxal identified districts. In Odisha, out of 30, 12 are Naxal affected and in West Bengal majority are non- Naxal affected districts (12 out of 18). So, out of 142 districts in selected states 72 are Naxal affected and 70 are non-Naxalite districts.

To mention here, for district level analysis, data is available till 2009<sup>4</sup>. As we have used 2001 census data , the crime data of 2001 is considered to carry out the district level analysis. Data collected from census 2001 are percent urban, age at marriage, literacy, work status, provision of drinking water, electricity. From the latest round of District Level Household and Facility Survey (2007-08) information collected are *pucca*( concrete) house, proportion with BPL cards, provision of primary and middle school, government health facility, availability of doctors, safe delivery and immunization<sup>5</sup>. Data has been analyzed for 142 districts of 6 states in EXCEL and SPSS. Eighteen types of crime are enlisted. Techniques used for data analysis are rates and ratios, calculation of composite indices, and least squared multiple linear regressions.

Following the methodology of Human Development Index three indices are generated, as follows: Social index (SI) is composed of proportion rural (urbanization), proportion marrying below age 18 and proportion illiterate; economic–infrastructure index (E&I) is a combination of percent non working, availability of drinking-water, electricity and availability of primary and middle school. While health index (HI) includes percentage of availability of any government health facility and doctors, proportion experiencing safe delivery and immunization. The index

value ranges from 0 to 1, higher the value better is the development. Calculations of composite indices are grouped as positive and negative indicator. The indicators that affect development in a positive way are categorized as positive indicators and those affecting in a negative way are categorized as negative indicators.

For positive indicators the index is usually computed as:

$$\frac{V_i - V_{min}}{V_{max} - V_{min}}$$

For negative indicators the index is usually computed as:

$$\frac{V_{max} - V_i}{V_{max} - V_{min}}$$

Where,

$V_i$  = Actual value in series

$V_{min}$  = Minimum value (taken as 0)

$V_{max}$  = Maximum value (taken as 100)

The indices are grouped in such a way that comparison can be made within and across states; with the ranges as follows:

SI (Social Index) = <0.30; 0.30-0.39; 0.40-0.49; 0.50 and above

E&II (Economic and Infrastructure Index) = <0.60, .060-0.69; 0.70-0.79 and 0.80 and above

HI (Health Index) = <0.30, 0.30-0.39; 0.40-0.49; 0.50 and above

In multiple linear regressions of Murder rate and total crime rate are taken as dependent variables. District level data are analyzed and variables included in the regression analysis are status of the district i.e. whether the district are identified as Naxalite or non- Naxalite, percent rural (Urban), density per sq km, female to male sex ratio, percent married below age 18, percent illiterate, percent with Below Poverty Line (BPL) card and percent area under forest.

## RESULTS

Results are presented in three parts. The first part deals with overall crime situation and naxalviolence in selected six states namely, Andhra Pradesh, Bihar, Chhattisgarh, Jharkhand, Odisha and West Bengal. The second part deals with social, economic and health related development of the districts and the third part deals with relationship of space (Naxalvis a vis Non Naxal) and development indices with crime and murder.

- *Levels and trends of violence and crime in Naxal affected states*

In levels and trends of crime, we analyzed incidence of Naxal violence (in absolute numbers), severity rate of violence perpetuated by Naxals (i.e. death per 100 incidences), crime rates under Indian Penal Code (IPC) in Naxalite and non Naxalite districts. To mention, crime or murder considered in the analysis are not necessarily made by the naxalites- all these crimes are noted under IPC. There is a substantial increase in incidence of Naxal violence in Jharkhand, Odisha and West Bengal (fig 1). From 825 cases in 2004, Naxal violence has gone up to 1375 in 2009 in Jharkhand, i.e. 13 percent average annual rate of increase. In Odisha and West Bengal, during the same time period, Naxal violence has visualized 80 percent and 336 percent average annual rate of increase. In West Bengal, the trend of increase of this violence is remarkable from 2007 onwards. On the contrary, in Chhattisgarh, though the event picked up in 2006, it has declined gradually; in Andhra Pradesh, it is already in a declining mode since 2004. Bihar experiences a status quo. The maximum severity of Naxal incidences is found in West Bengal followed by Chhattisgarh. In 2004, West Bengal experienced 85 deaths per 100 incidences and though the severity has declined in 2005, incidences has again picked up to 67 deaths per hundred in 2009. Situation is also worse in Chhattisgarh as the severity ranged from 39 (2004) to 57 (2009) deaths per hundred. While in all other states, severity has declined with a level below 35 percent in 2009. To mention here, in 2007, severity rate of Naxal incidence in Odisha was same as West Bengal (57), yet thereafter, Odisha's situation has improved substantially over West Bengal.

Now, let us look into the crime rates in 2001 in Naxal vis a vis non-Naxal affected districts of selected states (fig 2). Crime rates as a whole (18 crimes together) reveals that except Bihar and Jharkhand, in all other states, the rate is more in Non-Naxalite districts. So, the proposition of having more crime rate in Naxalite areas seems to be untrue. Now, if crime rates at district levels are looked into, some more insights can be drawn (table 1). For example, in Andhra Pradesh, the first three districts where crime rates maximize are Hyderabad, Rangareddy and Nellore, all of which fall in the Non-Naxalite zone. While in Bihar, Sitamari district accounts substantially high crimes followed by Patna and Munger, all hail from the Naxalite area. In Chhattisgarh, where crime rate is almost 50 points higher in non-Naxalite districts, reveals that the rate is comparatively more in most of the districts with bigger urban centers like Bilaspur, Raipur, Durg and Korba- all four districts are in non-Naxalite zones. In Jharkhand, majority of the Naxal affected districts are having higher crime rates. In Odisha, due to high crime rates in Khorda and Cuttack of Non-Naxalite zone, the crime rate is lower in Naxal sub-region. While in West Bengal, Kolkata- a non-Naxalite district and state capital is an outlier with an abnormally high crime rate (mainly because of Theft) and that's why Non-Naxalite section is having more crime rate as a whole. To see more in detail, 18 crime rates calculated in Naxal and non Naxal affected

districts (for brevity, table not shown). Except Murder and riot, which are comparatively more in Naxalite areas, in almost all states, no such consistent trend is found.

- *Understanding the pattern of development*

During the 1990s development of people has been defined as a process of enlarging people's choices to raise their level of well being. Human Development reports have also shown that development of people is not only due to the economic growth but there are many other factors behind it. Spatial pattern of development in each state is stated below (table 2):

In Andhra Pradesh, Social index stands highest in Hyderabad (0.86, a non Naxalite district) and lowest in Mahabubnagar (0.38, a Naxalite district). In majority of the Naxalite districts, the social index (SI) value is in between 0.40 to 0.50 while for non- Naxalite districts, the values are above 0.5. In Economic- infrastructure index (E&II) and health index (HI), much variation is not observed.

Development in Bihar as a whole is comparatively less. The SI is maximum in Patna, the state capital and belongs to the Naxalite affected section. While in other districts, the index value is in between 0.35 to 0.45. In E&II, Patna scores the highest (0.65) against the lowest (0.44) in Banka district. The HI is substantially less (lower than 0.30) in most of the bordering districts, with its lowest mark in Jamui (0.18). As a whole, spatial variation is not observed in Naxalite *vis-a-vis* non- Naxal affected districts in Bihar.

Contrary to Bihar, Chhattisgarh observes good variation in SI and E&II over space. To elaborate, in Naxal affected districts, SI ranges from 0.40 to 0.56 while in Non Naxal affected districts it is from 0.56 to 0.66. Durg, a non- Naxalite district ranks first in SI and E&II too. The HI is quite low in Koraiya (0.28) – a Naxalite district as well as in Korba (0.25) a non naxalite district.

Relatively well developed (more urbanized) districts of Jharkhand, namely Ranchi, Bokaro, Dhanbad, Singhbhum and Hazaribagh are adjacent districts located in the central-southern part and all are categorized under Naxalite zones. SI score ranges from 0.68 in Purba Singhbhum to 0.38 in Palamu and Dumka. Variation in E&II across districts is negligible, ranging from 0.42 in Giridih to 0.60 in Purba Singhbhum. While in HI, many districts in Naxalite zone are doing better compared to non- Naxalite part. The highest HI is found in Purba Singhbhum district (0.053) where Jamshedpur is located; followed by Ranchi (0.42) – both districts are in Naxalite region.

Social Index in Odisha is observed maximum in Khorda (0.71, where state capital Bhubneshwar is located) followed by Jharsuguda (0.69) of non-Naxalite section. Some of the lowest SIs are

found in Malkangiri (0.30), Nabarangapur (0.33) and Koraput (0.36) – all three are located in the Naxalite zone of southern Odisha. In E&II, variation in Naxalite versus non-Naxal affected districts are not found much ranging from 0.47 in Jharsuguda to 0.66 in Jagatsinghpur (where Paradeep Port is located). In majority of the district the index value lies between 0.50 to 0.60. In HI, however, many non-Naxal affected districts are doing well in the sense that their index score is 0.60 and above. Except, Mayurbhanj, in all other non-Naxal affected districts the HI value is 0.50 and above. On the contrary, in the Naxalite part, except, Sambalpur and Sundargarh, values of HI range from 0.45 to 0.55.

Kolkata, a non Naxalite district and state capital of West Bengal, stands as an outlier in all three indices and thus helps making the index of non-Naxalite section much better than its Naxalite counterpart. For instance, in SI, Kolkata's achievement is 88 percent followed by Medinipur (72 percent); in E&II, Kolkata's score is 0.83 following Haora and Hugli (0.72) and in HI the former scores 0.91, followed by the second highest Hugli, 0.68. In the lowest order, stands Malda- a non-Naxalite district in north Bengal and Purulia, a Naxalite district.

Now, to understand the statistical difference of Naxalite versus non Naxalite districts in computed indices, least squared regression is performed for each selected state (Table 3). In social development, Naxal affected districts are significantly lower than the non-Naxal affected districts in Andhra Pradesh, Chhattisgarh and Odisha. While in economic–infrastructural development, only significant difference is found in Chhattisgarh, where Naxalite affected districts are performing poorly. In health index, a contrary picture is observed- in Jharkhand where the Naxal affected region is doing significantly better over its counterpart- non – Naxalite districts. And in Odisha it is the other way round in health index.

To understand the determinants of crime and specifically murder, least squared regressions are applied, as shown in table 4. With increase in rural proportion (lesser urbanization) crime rate as well as Murder rate significantly decreases. On the contrary, higher density and higher proportion of households with poverty (having BPL card) are significant positive determinant of crime. To mention here, no marked difference is found between Naxal and non Naxal affected districts in crime rate. While, there exists marked distinction between these two areas in murder rate as the Naxal affected districts are showing notably higher rate. With increase in proportion illiterate, murder rate is increasing. On the other hand, female to male ratio is having a negative and significant relation to murder, i.e. high female proportion in population helps to reduce murder rate considerably. The negative direction is also observed with density of population and percentage area under forest- with increase in both the parameters, murder rate substantially declines.

## DISCUSSIONS AND CONCLUSION

Jharkhand, Odisha and West Bengal are three states where the Naxalite incidence is on rise. Severity of such incidence (deaths per incidence) is high in West Bengal in 2009. Total crime rate is marginally more in Naxal affected districts of two states – Bihar and Jharkhand out of six selected states, yet murder rate is more unanimously in Naxalite part of all states. Social development is found to be more in the non- Naxal districts of Andhra Pradesh, Chhattisgarh, Odisha and West Bengal. In economic- infrastructure development, only major difference is found in Chhattisgarh where Naxal affected districts are performing fairly poorly. While interestingly, in health indicator, Naxal affected districts in Jharkhand are significantly better, contrary to what we found in Odisha. As a whole, only in social development, a considerable difference is observed between Naxalite and non- Naxalite states where the former is performing inadequately. High population density, urbanization, degraded environment and poverty are considered to be positively related with the crime rate (Lochner and Moreti 2004; Usher 1997), where as high literacy rate and a balance sex ratio (Messner and Sampson 1991; South and Messner 1987) seem to lower the crime rate; as is found in our study too.

No significant difference is observed between Naxalite and non- Naxalite districts in overall crime rates. However, Naxal areas are having markedly higher murder rates when other socio-economic variables are controlled contradicting the finding of Borooah (2008), yet supporting Dreze and Khera's (2000) result. It is also been pointed out that poverty (can be taken as a synonym of lack of development) bears no significant association with murder, supporting Dreze and Khera's finding (2000). Statistically speaking, districts affected with Naxalites are at par with the performance of other districts in economic and health related development except Chhattisgarh and Odisha. However, in social development majority of the Naxal affected districts are lagging behind. Murder rate reduces with increase in female- male ratio, literacy, population density, proportion forest area and increases with urbanization, denying the previous finding of Dreze and Khera (2000) that urbanization does not bear any relation with murder. To go little in depth, the Naxalite affected area is burdened with discrimination and atrocities, gender related inequalities and social exploitation. The Expert Group Report (2008) mentions that the weaker section of population of naxal affected areas do not have much faith in police and do not believe that justice will be done to them against powerful.

Higher proportion of rural population pacifies crime and murder as revealed in our study. It supports the popular notion that criminal activity is relatively high in city, although crime is not manifested uniformly in a city. Crime against property i.e. burglary, theft (auto theft and other theft including pocket –picking, chain snatching) is quite common in urban centers of India.

Increased level of migration from rural to urban areas, social tension (UN 2005) and attempt of the elite groups to modernize them may stimulate criminal activities (Fishers, 1987; Krivo and Peterson, 1996; Weisheit, falcone& Wells, 1999, Borooah 2008). To add one more point in this regards is that criminal persons have less chance of hiding themselves in rural areas because people know each other well. The main reasons of crime in urban areas are lesser chances of arrest and recognition, supporting the views of Glaser and Sacerdote(1996).

Sex- ratio, an important demographic variable, is negatively associated with crime and murder rate. In areas where female-male ratio is high, incident of overall crime is low, which support the popular notion that gender is strongly linked to various form of violence. Barber (2000) and O' Brien (1991) found that low sex ratio correlates with greater violent crime across nation. News reports and case studies bring out some basic feature of violent crimes in India. Violence is mainly committed by males and in case of murders; the main motives are disputes relating to property and women, altercation and vendetta. Propensity of doing crime is less in women especially murder,as is also found by Steffensmeir and Allan (1996).

The effect of population density on crime is ambiguous. Our results show opposing effect; crime as a whole increases with density while propensity of murder decreases with increase in density. The plausible explanation is that high density can highlight inequalities and thus can provide more opportunities of crime like theft and hurt. While for murder, one needs vacant space and thus in densely populated areas it is difficult to execute. Education playsan important moderating effect on crime rate. Higher levels of educational attainment raise skill and abilities which are associated with higher return in the labor market, thereby increasing the opportunity cost of criminal behavior, as also indicated by Freeman, (1991, 1996);Grogger, (1995, 1998);Lochner and Moretti, (2001). Education may also have a 'civilization effect' by improving the moral instance and promoting the virtue of hard work and honesty (Fajnzlber et.al. 2002, Usher, 1997). Another finding of this paper is thatpoverty has a potent factor for committing a crime.Moreover, in Indian society the risk of being caught is much higher among the poor than among the rich (Dreaz andKhera, 2000).

The main drawback of this paper is that we do not have any idea about the perpetrator of Murder or crime i.e. whether it is done by the Naxalites or otherwise. Crime is also related with inequality and pace of change a society is witnessing, which are beyond the scope of the paper. However, it can be firmly said that within the availability of time series crime data and varying development indices, a potent field of research is remaining less explored in Indian context. This paper posed two questions: is it a fact that there is less development in districts affected by Naxalite activity compared to those which are free from Naxalite activity? And can we say that

crime, especially murder is more in Naxalite districts in India? It is the strong belief of the Government of India (Government of India 2008) that issues of high poverty, low education, and limited employment opportunities are, in significant part, responsible for the growth of extremism in India. In this context, many of the variables used in this study were “developmental” variables reflecting the level of economic, social development of a district’s population. High population density, urbanization, degraded environment and poverty are positively related with the crime rate, where as high literacy rate and a balance sex ratio seem to lower the crime rate; as is found in our study too. We can definitely state that in naxal affected districts murder rate (not crime rate) is significantly higher than other districts indicating a sense of insecurity. The social aspects of development (and not economic- infrastructure or health parameters) is radically lagging behind in most of the Naxal region in the study area. Chhatisgarh and Odisha need special attention on economic development and health related development respectively. Thus Chhattisgarh needs special emphasis for its economic and infrastructure development in Naxal hit part while Odisha should promote health related development. Gender sensitive policies to maintain a balanced sex ratio, promoting education especially for the women and protecting forest land would be helpful for the policy makers to handle the insecurity of the Naxal hit areas. It would be wise if the government target the village women to acquire skill for a decent living and help them promoting social awareness along with creating job for local people under government programme.

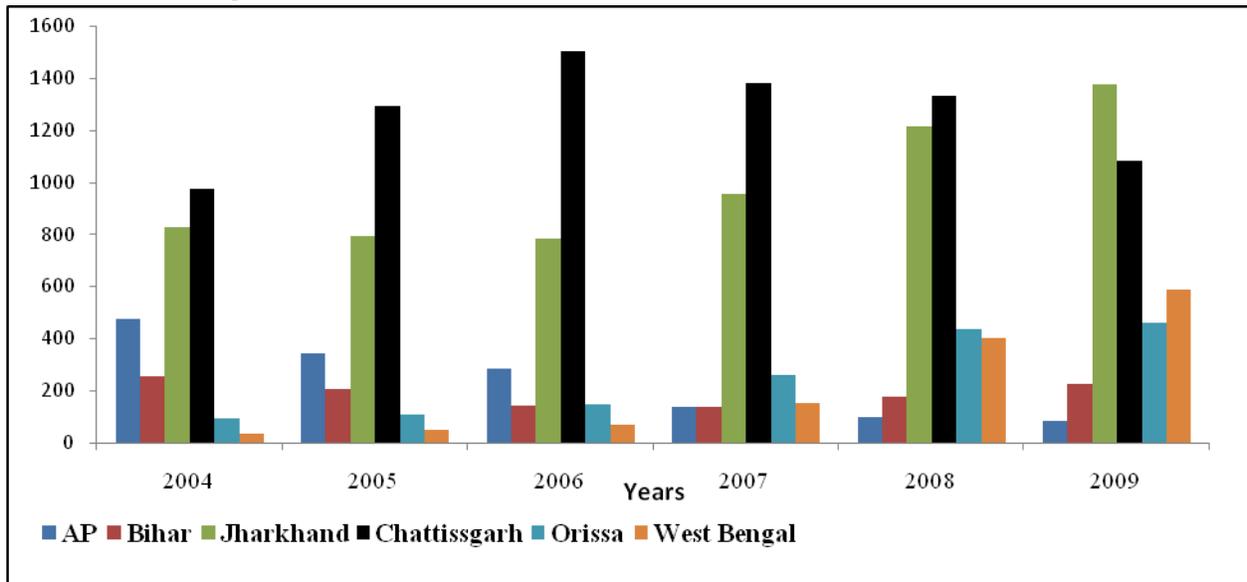
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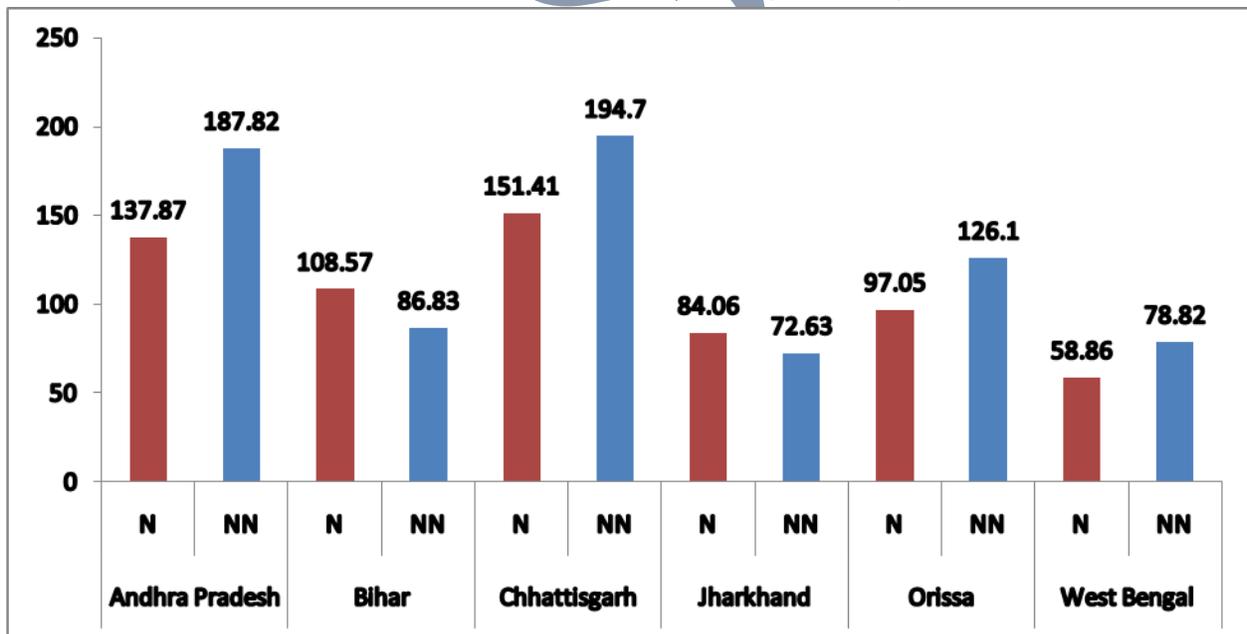
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**Figure 1: Numbers of Naxal violence in selected states of India**



Note: Based on moving average

**Fig 2: Total crime rates in Naxal affected (N) and Non-Naxal affected (NN) Districts of Selected States, 2001 (in '00000)**



**Table 1: Top three districts in selected states by Total Crime rates, 2001**

State/Districts	Crime Rate (in '00000)
<b>Andhra Pradesh</b>	<b>171.8</b>
Hyderabad	320.9
Rangareddi	281.4
Nellore	197.2
<b>Bihar</b>	<b>106.7</b>
<i>Sitamarhi*</i>	<i>349.4</i>
<i>Patna*</i>	<i>182.2</i>
<i>Munger*</i>	<i>154.8</i>
<b>Chhatisgarh</b>	<b>184.9</b>
<i>Koriya*</i>	<i>280.8</i>
Durg	233.6
Raipur	225.5
<b>Jharkhand</b>	<b>94.6</b>
<i>PurbiSinghbhum*</i>	<i>137.1</i>
<i>Kodarma*</i>	<i>133.8</i>
<i>Hazaribagh*</i>	<i>109.7</i>
<b>Odisha</b>	<b>127.1</b>
Khordha	270.8
<i>Sambalpur*</i>	<i>232.4</i>
Cuttack	181.9
<b>West Bengal</b>	<b>76.7</b>
Kolkata	261.3
Darjiling	110.7
<i>South Twenty Four Parganas*</i>	<i>84.3</i>

\*Indicates Naxalite affected districts

**Table: 2 Development indices in districts of selected states**

States/ Districts	SI	E&II	HI	States/ Districts	SI	E&II	HI
<b><u>Andhra Pradesh</u></b>							
<i>Khammam</i>	<i>0.53</i>	<i>0.76</i>	<i>0.50</i>	<i>PashchimChampanan</i>	<i>0.35</i>	<i>0.59</i>	<i>0.24</i>
	<i>0.48</i>	<i>0.75</i>	<i>0.46</i>	<i>Patna</i>	<i>0.60</i>	<i>0.65</i>	<i>0.45</i>

<i>Adilabad</i>	<i>0.51</i>	<i>0.71</i>	<i>0.51</i>	<i>PurbaChampanan</i>	<i>0.36</i>	<i>0.58</i>	<i>0.26</i>
<i>Anantapur</i>	<i>0.51</i>	<i>0.80</i>	<i>0.51</i>	<i>Sheohar</i>	<i>0.37</i>	<i>0.58</i>	<i>0.20</i>
<i>East Godavari</i>	<i>0.53</i>	<i>0.74</i>	<i>0.57</i>	<i>Sitamarhi</i>	<i>0.35</i>	<i>0.58</i>	<i>0.29</i>
<i>Guntur</i>	<i>0.60</i>	<i>0.77</i>	<i>0.53</i>	Araria	0.38	0.58	0.27
<i>Karimnagar</i>	<i>0.52</i>	<i>0.82</i>	<i>0.50</i>	Banka	0.32	0.44	0.23
<i>Kurnool</i>	<i>0.49</i>	<i>0.77</i>	<i>0.47</i>	Begusarai	0.40	0.58	0.30
<i>Mahbubnagar</i>	<i>0.38</i>	<i>0.75</i>	<i>0.50</i>	Bhagalpur	0.51	0.60	0.41
<i>Medak</i>	<i>0.48</i>	<i>0.77</i>	<i>0.60</i>	Buxar	0.43	0.59	0.33
<i>Nalgonda</i>	<i>0.46</i>	<i>0.78</i>	<i>0.51</i>	Darbhanga	0.42	0.59	0.27
<i>Nizamabad</i>	<i>0.53</i>	<i>0.80</i>	<i>0.64</i>	Gopalganj	0.45	0.56	0.34
<i>Prakasam</i>	<i>0.48</i>	<i>0.76</i>	<i>0.47</i>	Katihar	0.39	0.58	0.21
<i>Srikakulam</i>	<i>0.46</i>	<i>0.65</i>	<i>0.45</i>	Kishanganj	0.44	0.52	0.17
<i>Visakhapatnam</i>	<i>0.60</i>	<i>0.67</i>	<i>0.39</i>	Lakhisarai	0.40	0.57	0.29
<i>Vizianagaram</i>	<i>0.48</i>	<i>0.71</i>	<i>0.41</i>	Madhepura	0.34	0.60	0.26
<i>Warangal</i>	<i>0.55</i>	<i>0.78</i>	<i>0.48</i>	Madhubani	0.39	0.59	0.31
Chittoor	0.52	0.79	0.45	Purnia	0.40	0.56	0.24
Cuddapah	0.55	0.80	0.48	Saharsa	0.34	0.60	0.34
Hyderabad	0.86	0.80	0.91	Samastipur	0.38	0.57	0.35
Krishna	0.61	0.77	0.61	Saran	0.44	0.55	0.37
Nellore	0.56	0.75	0.39	Sheikhpura	0.43	0.58	0.35
Rangareddi	0.67	0.79	0.56	Siwan	0.43	0.56	0.28
West Godavari	0.53	0.77	0.40	Supaul	0.43	0.60	0.27
<b><u>Bihar</u></b>	<b><i>0.41</i></b>	<b><i>0.57</i></b>	<b><i>0.30</i></b>	Vaishali	0.44	0.55	0.39
<i>Aurangabad</i>	<i>0.46</i>	<i>0.57</i>	<i>0.35</i>	<b><u>Chhattisgarh</u></b>	<b><i>0.55</i></b>	<b><i>0.70</i></b>	<b><i>0.32</i></b>
<i>Gaya</i>	<i>0.41</i>	<i>0.53</i>	<i>0.22</i>	<i>Bastar</i>	<i>0.48</i>	<i>0.69</i>	<i>0.37</i>
<i>Jamui</i>	<i>0.31</i>	<i>0.39</i>	<i>0.18</i>	<i>Dantewada</i>	<i>0.40</i>	<i>0.67</i>	<i>0.38</i>
<i>Jehanabad</i>	<i>0.39</i>	<i>0.58</i>	<i>0.35</i>	<i>Jashpur</i>	<i>0.53</i>	<i>0.60</i>	<i>0.28</i>
<i>Rohtas</i>	<i>0.44</i>	<i>0.59</i>	<i>0.34</i>	<i>Kanker</i>	<i>0.50</i>	<i>0.72</i>	<i>0.33</i>
<i>Bhojpur</i>	<i>0.44</i>	<i>0.59</i>	<i>0.36</i>	<i>Koriya</i>	<i>0.56</i>	<i>0.63</i>	<i>0.27</i>
<i>Kaimur</i>				<i>Rajnandgaon</i>			
<i>(Bhabua)</i>	<i>0.38</i>	<i>0.56</i>	<i>0.26</i>		<i>0.57</i>	<i>0.75</i>	<i>0.32</i>
<i>Khagaria</i>	<i>0.37</i>	<i>0.61</i>	<i>0.39</i>	<i>Surguja</i>	<i>0.42</i>	<i>0.57</i>	<i>0.27</i>
<i>Munger</i>	<i>0.56</i>	<i>0.55</i>	<i>0.37</i>	<i>Kawardha</i>	<i>0.41</i>	<i>0.68</i>	<i>0.26</i>
<i>Muzaffarpur</i>	<i>0.44</i>	<i>0.59</i>	<i>0.31</i>	Bilaspur	0.59	0.71	0.30
<i>Nalanda</i>	<i>0.44</i>	<i>0.60</i>	<i>0.34</i>	Dhamtari	0.61	0.76	0.40
<i>Nawada</i>	<i>0.33</i>	<i>0.56</i>	<i>0.29</i>	Durg	0.66	0.77	0.37

Cont....

States/ Districts	SI	E&II	HI	States/ Districts	SI	E&II	HI
Janjgir-Champa	0.55	0.76	0.30	Balangir	0.54	0.63	0.54
Korba	0.61	0.64	0.25	Baleshwar	0.59	0.67	0.50
Mahasamund	0.56	0.75	0.41	Bargarh	0.52	0.58	0.47
Raigarh	0.56	0.75	0.38	Baudh	0.46	0.61	0.48
Raipur	0.60	0.76	0.32	Bhadrak	0.62	0.61	0.51
<b><u>Jharkhand</u></b>	<b>0.49</b>	<b>0.51</b>	<b>0.32</b>	Cuttack	0.69	0.50	0.47
<i>Bokaro</i>	<i>0.63</i>	<i>0.58</i>	<i>0.33</i>	Dhenkanal	0.57	0.60	0.40
<i>Chatra</i>	<i>0.39</i>	<i>0.47</i>	<i>0.24</i>	Jagatsinghapur	0.64	0.66	0.51
<i>Gumla</i>	<i>0.42</i>	<i>0.45</i>	<i>0.39</i>	Jharsuguda	0.69	0.47	0.65
<i>Hazaribagh</i>	<i>0.51</i>	<i>0.50</i>	<i>0.39</i>	Kandhamal	0.54	0.63	0.50
<i>Lohardaga</i>	<i>0.51</i>	<i>0.46</i>	<i>0.46</i>	Kendrapara	0.57	0.61	0.45
<i>Palamu</i>	<i>0.38</i>	<i>0.51</i>	<i>0.32</i>	Khordha	0.71	0.52	0.55
<i>PashchimiSinghbhum</i>	<i>0.52</i>	<i>0.55</i>	<i>0.37</i>	Mayurbhanj	0.45	0.54	0.44
<i>Garhwa</i>	<i>0.48</i>	<i>0.49</i>	<i>0.38</i>	Nayagarh	0.49	0.59	0.51
<i>Dhanbad</i>	<i>0.66</i>	<i>0.61</i>	<i>0.32</i>	Nuapada	0.48	0.60	0.55
<i>Giridih</i>	<i>0.39</i>	<i>0.42</i>	<i>0.18</i>	Puri	0.62	0.61	0.54
<i>Kodarma</i>	<i>0.40</i>	<i>0.46</i>	<i>0.27</i>	Sonapur	0.49	0.65	0.47
<i>Ranchi</i>	<i>0.52</i>	<i>0.50</i>	<i>0.42</i>	<b><u>West Bengal</u></b>	<b>0.53</b>	<b>0.64</b>	<b>0.47</b>
Deoghar	0.41	0.47	0.30	<i>Bankura</i>	<i>0.41</i>	<i>0.62</i>	<i>0.50</i>
Dumka	0.38	0.44	0.26	<i>mednipur</i>	<i>0.72</i>	<i>0.53</i>	<i>0.48</i>
Godda	0.41	0.49	0.20	<i>Puruliya</i>	<i>0.40</i>	<i>0.54</i>	<i>0.48</i>
Pakaur	0.43	0.50	0.29	<i>Barddhaman</i>	<i>0.58</i>	<i>0.67</i>	<i>0.49</i>
Sahibganj	0.46	0.45	0.26	<i>Hugli</i>	<i>0.62</i>	<i>0.72</i>	<i>0.68</i>
<b><u>Odisha</u></b>	<b>0.55</b>	<b>0.59</b>	<b>0.47</b>	<i>South 24 Parganas</i>	<i>0.51</i>	<i>0.65</i>	<i>0.48</i>
<i>Debagarh</i>	<i>0.52</i>	<i>0.58</i>	<i>0.56</i>	Birbhum	0.39	0.61	0.44
<i>Gajapati</i>	<i>0.50</i>	<i>0.53</i>	<i>0.32</i>	DakshinDinajpur	0.45	0.62	0.40
<i>Malkangiri</i>	<i>0.30</i>	<i>0.59</i>	<i>0.38</i>	Darjiling	0.63	0.63	0.55
<i>Rayagada</i>	<i>0.42</i>	<i>0.58</i>	<i>0.21</i>	Haora	0.67	0.72	0.58
<i>Sambalpur</i>	<i>0.62</i>	<i>0.65</i>	<i>0.61</i>	Jalpaiguri	0.58	0.57	0.58
<i>Ganjam</i>	<i>0.50</i>	<i>0.60</i>	<i>0.39</i>	Koch Bihar	0.45	0.60	0.48
<i>Jajapur</i>	<i>0.60</i>	<i>0.57</i>	<i>0.45</i>	Kolkata	0.88	0.83	0.91
<i>Kalahandi</i>	<i>0.46</i>	<i>0.61</i>	<i>0.40</i>	Maldah	0.39	0.54	0.35
<i>Kendujhar</i>	<i>0.51</i>	<i>0.56</i>	<i>0.41</i>	Murshidabad	0.40	0.62	0.41
<i>Koraput</i>	<i>0.36</i>	<i>0.60</i>	<i>0.45</i>	Nadia	0.51	0.66	0.57
<i>Nabarangapur</i>	<i>0.33</i>	<i>0.63</i>	<i>0.40</i>	North 24 Parganas	0.68	0.70	0.55

<i>Sundargarh</i>	<i>0.65</i>	<i>0.58</i>	<i>0.57</i>	Uttar Dinajpur	0.45	0.61	0.32
<i>Anugul</i>	<i>0.52</i>	<i>0.62</i>	<i>0.38</i>				

Note: SI: Social Index; E&II: Economic and Infrastructure Index; HI: Health Index  
Naxal affected districts are in bold Italic font

**Table 3: Variation in development indices in Naxalvis- a- vis Non Naxal affected districts: Coefficients of independent Linear Regressions for each index and each state**

States	Coefficient of Naxalite Districts			
	Social Index	Economic & Infrastructure Index	Health Index	N
	B- Value			
<b>Andhra Pradesh</b>	-0.11***	-0.03	-0.04	22
<b>Bihar</b>	0.01	0.00	0.01	36
<b>Chhattisgarh</b>	-0.11***	-0.07***	-0.03	15
<b>Jharkhand</b>	0.08	0.04	0.09**	17
<b>Odisha</b>	-0.09**	0.00	-0.07**	29
<b>West Bengal</b>	0.000	-0.02	-0.01	17
<b>Total</b>	-0.036**	-0.002	-0.017	141

Note:\*\*\* Significant at 1% level; \*\* Significant at 5% level; \* Significant at 10% level

**Table4: Determinants of crime (Total) rate and murder rate: Coefficients of independent Linear Regressions**

Variable	Total Crimes	Murder
	B- Value	
<b>Naxalite</b>	272.54	24.48***
<b>Non- Naxalite ( R) proportion Rural</b>	-60.60***	-1.42***
<b>Female to Male ratio</b>	-3.15	-0.31*
<b>Population Density</b>	0.21***	-0.05**
<b>Proportion female marrying below 18</b>	6.53	0.06

Proportion Illiterate	-11.60	0.95**
Proportion Non-Working	23.10	0.31
Proportion of House-Hold having BPL Card	43.94***	0.38
Proportion land Under forest	-35.08***	-0.90***
<b>R<sup>2</sup></b>	0.60	0.32
<b>N</b>	141	141

**Note:** \*\*\* Significant at 1% level; \*\* Significant at 5% level; \* Significant at 10% level

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<sup>1</sup>The Prime Minister in his march 14, 2006 address to the standing committee of Chief Ministers of state affected by Naxalite/ Maoist violence had said that this violence was the biggest national security threats.

<sup>2</sup> This Zone is afflicted by left extremist carried out by maoist. In common parlance it is known as 'Naxlite movement' which stretches from *Pashupati* in Nepal to *Tirupati* in Andhra Pradesh, the whole area constitute the states like Bihar, Uttar Pradesh, West Bengal, Jharkhand, Chattisgarh, Odisha and Andhra Pradesh

<sup>3</sup>Broad classification of crimes under the Indian Penal Code (IPC) are i) Crimes Against Body: Murder, Its attempt, Culpable Homicide not amounting to Murder, Kidnapping & Abduction, Hurt, Causing Death by Negligence; ii) Crimes Against Property: *Dacoity*, its preparation & assembly, Robbery, Burglary, Theft; iii) Crimes Against Public Order: Riots, Arson; iv) Economic Crimes: Criminal Breach of Trust, Cheating, Counterfeiting; v) Crimes Against Women: Rape, Dowry Death, Cruelty by Husband and Relatives, Molestation, Sexual Harassment and Importation of Girls; vi) Crimes Against Children: Child Rape, Kidnapping & Abduction of Children, Procurator of minor girls, Selling/Buying of girls for Prostitution, Abetment to Suicide, Exposure and Abandonment, Infanticide, Feticide; vii) Other IPC crimes.

<sup>4</sup> The recently published Crime in India 2009, data reveals that the total cognizable crime (defined as the one which an officer in-charge of police station may investigate without the order of a magistrate and affect arrest without warrant, the police has a direct responsibility to take immediate action on the receipt of a complaint or of a credible information in such crime. Cognizable crime are broadly categorized in two parts, Indian Penal Code (IPC) or under the Special and Local Law (SLL). In this paper we had considered crime which are falling under IPC) under IPC in general has been rising over time. Except *Dacoity* and Burglary/ House breaking which have shown declining trend over a period of 57 years, murder has increased by 230 percent, rape by 760 percent, kidnapping and abduction by 544 percent, robbery by 167 percent and riot by 207 percent.

<sup>5</sup> The Ministry of Health and Family Welfare (MoHFW), Government of India has designated the International Institute for Population Sciences (IIPS), Mumbai as the nodal agency for conducting the District Level Household and Facility Survey (DLHS). It is a household survey at the district level and in DLHS-3, the survey covered 611 districts in India. The survey used two-stage stratified random sampling in rural and three-stage stratified sampling in urban areas of each district. The information from 2001 Census was used as sampling frame for selecting primary sampling units (PSUs).