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**THE POLITICAL ECONOMY OF MINING REGULATIONS 2015:  
SPATIAL INEQUALITY AND RESOURCE CURSE IN TWO NEW STATES, INDIA**

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**Abstract**

It is striking why the resource-rich States in India are income poor. This calls for analyzing the fiscal policy practices in the resource-rich new States, particularly the fiscal space created by the mining proceeds; and in turn what the fiscal space is used for. Inquiring the “use of mining fiscal space” has high policy relevance in India, against the backdrop of recent Mines and Minerals Development and Regulation (MMDR) Amendment Bill, 2015. Such policy imperatives are comparable to the global initiatives like “oil-to-cash policy”. This paper explores the plausible impacts of MMDR 2015 (9B), which stipulates a portion of mining royalty and auction proceeds to redress the resource curse. Though nebulous estimates from the coal auction proceeds are on board, ambiguity remains how the newly generated fiscal space would resolve spatial inequalities.

Keywords: Political economy, Regulations, Mining, Industrial Policy, Fiscal Space, Inequality, Human Development

JEL classification: H5, I3, L5, O2, Q3

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## **THE POLITICAL ECONOMY OF MINING REGULATIONS 2015: SPATIAL INEQUALITY AND RESOURCE CURSE IN TWO NEW STATES, INDIA**

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It is striking why the resource-rich States in India are income poor; and suffer from large deficits in social and economic development. Why the newly formed States in India – Chhattisgarh and Jharkhand - has failed to translate their natural resource abundance to economic growth and human development? As per the India Human Development Report 2011, Chhattisgarh was ranked last among all States in India, with an HDI of 0.358, against the national average of 0.467. Jharkhand also remains at bottom level in the human development with an HDI of 0.376. This calls for analyzing the significance of fiscal policy practices in these resource-rich new States, with special reference to the fiscal space created by the mining revenues and in turn what the mining fiscal space is used for.

Theoretically, finding a sustainable fiscal space for human development involves asking what the purpose of fiscal space is, the timeframe for the analytical framework, and the political economy context within which it is implemented (Roy, 2015). Specifically, to what extent do local jurisdictions benefit from mining proceeds? This question of “use of mining fiscal space” has high policy relevance in India against the backdrop of the recent Mining Industrial Policy - Mines and Minerals Development and Regulation (MMDR) Amendment Bill, 2015 - which states a provision for District Mineral Foundation (DMF) for linking mining royalty and auction proceeds to improve the quality of life of the local populace, primarily the tribals, and improving the social infrastructure of these mining districts.

The “district” is taken as the unit of analysis of mining industrial regulation and development policy in India. Can this create regional disparities, as only a few districts in India contribute to mining regime? If so, can DMF mining industrial policy create socio-economic inequalities? This paper analyses the effect of mining and resource abundance on socioeconomic outcomes at the district level, in retrospect, of two resource-rich new States in India, viz., Chhattisgarh and Jharkhand.

The paper is organized into seven sections. Section 1 presents a macro policy backdrop of new mining regulations and state capacity; while Section 2 analyses the fiscal fiat and royalty regimes. Section 3 examines the effect of mining regulations on economic growth. Section 4 analyses the plausible effects of MMDR 2015 on the socioeconomic outcomes at the district level, of two resource-rich new States in India, viz., Chhattisgarh and Jharkhand. Section 5 explores the reasons for resource curse while section 6 examines the recent Mining Industry Policy initiatives to address the problems of resource curse and spatial inequalities. Section 7 concludes.

## **I. STATE CAPACITY AND MINING REGULATIONS: A POLICY BACKDROP**

The drafting of regulations often reflect “state capacity”, which is the power of the state to raise the fiscal capacity (Besley, 2013, Skocpol, 1985, Besley and Persson, 2011). The natural resource reliance is a significant determinant of the state capacities, though the political economy play a major role in the link between the two (McAdam, Tarrow and Tilly 2001, Mann 1984, World Bank, 1992). In order to increase the investment in the mining sector and promote sustainable mining practices to adequately meet the requirements of the industry without sacrificing environmental concerns, the Mines and Minerals (Development and Regulations) (MMDR) Act, 1957 had been amended. The new Act is named as The Mines and Minerals (Development and Regulation) (Amendment) Bill, 2015.

MMDR 2015 has suggested a creation of District Mineral Funds (DMF) for the welfare of the project affected people. The new bill also provides greater decentralisation of power to States governments for allocation of resources. The amended Act under section 9(B) says that the State Governments shall establish a non-profit body called District Mineral Foundation (DMF) in all the mining affected districts. The objective of the DMF is to work for the interest and benefits of the persons and the areas affected by the mining operations in accordance with the State Government. The holder of a Mining Lease has to pay an annual amount to the DMF of the district for which the percentage of royalty to be paid may be prescribed by the Central Government in case of minerals other than minor minerals and prescribed by the State Government in case of minor minerals. In the earlier version of MMDR, it was suggested through *profit sharing formula* - 26 per cent of profits from the coal miners and 100 per cent royalty equivalent money from other miners-, which has become controversial, and dropped in the present Bill. However, the ambiguity remains about the new levies in addition to the existing mining taxes and royalty.

MMDR, 2015 proposed that

*9B. (1) In all districts affected by mining related operations, the State Government shall, by notification, establish a trust to be called the District Mineral Foundation, as a non-profit body.*

*(2) The composition and functioning of the District Mineral Foundation shall be regulated in such manner as may be prescribed by the State Government.*

*(3) The object of the District Mineral Foundation shall be to work for the interest and benefit of persons, or areas, affected by mining related operations in such manner as may be prescribed by the State Government.*

*(4) The holder of a mining lease or a prospecting license-cum-mining lease shall pay annually to the District Mineral Foundation of the District in which the mining operations are carried on,—*

*(a) in case of minerals other than minor minerals, such percentage of the royalty paid during the financial year as may be prescribed by the Central Government; and*

*(b) in case of minor minerals, such amount as may be prescribed by the State Government;*

The new draft says, “for the purpose of granting a mining lease in respect of any notified minerals, the state government shall select, through auction by a method of competitive bidding, including e-auction, an applicant who satisfies the eligibility conditions.” So it cleared the way for the auction of iron ore and other non-coal minerals. Aiming to improve transparency in allocation and to get fair share of the value of minerals for the government, the new bill prescribed competitive bidding by auction for the allocation of mining leases. The proposed method has its roots in the National Mineral Policy 2005 (Hoda Committee), constituted by erstwhile Planning Commission, Government of India. It says that “the scheme envisages that the successful bidder will conduct the exploration and prospecting work at his own risk and cost. In case there is any find, he will have to abide by the bid conditions which could be in the form of a production share, or a payment linked to the royalty payable etc.” To look at the issue of illegal mining, the amended act made the offence of illegal mining a cognizable offence. The bill enabled the State Governments to set special courts for trial of offences under the act. The Act empowered the Central Government to frame rules for prescribing the timelines for the different stages in processing the application for grants of mineral concessions and their renewals.

## II. FISCAL SPACE FROM MINING: REGIME SHIFTS AND ROYALTY PROCEEDS

Mining taxation regime of iron and coal in India is in a state of flux. Particularly, the current methodology of royalty estimation for mining sector requires a relook. The mining royalty regime in India is onerous. India has one of highest royalty rates in the world. Chhattisgarh and Jharkhand have the significant share of iron and coal deposits in India. Though there has been an increasing trend in the regime shift in mining royalty away from the tonnage royalty regime to *ad valorem*, the rationalization of rates to internationally competitive rates has not yet materialized (Chakraborty, 2015). Every three years, the royalty rates are revised upwards in India. In ferrous royalty regime, though there has been a shift from tonnage to *ad valorem*, the base estimation suffers from discretion in deciding the grade content ( $\lambda_{1,2,3...n}$  in the following formula) of the extracted ore in arriving at royalty calculations.

$$R_{ROM} = [\lambda_{1,2,3...n} ROM] * Y_{ore}$$

where

$R_{ROM}$  = Royalty revenue from metal contained in Fe ore

$\lambda_{1,2,3...n}$  = Grade percent of Metal in the different types of extracted iron ore

ROM = Tonnage of Run of Mine (ROM) Ore Treated

$Y_{ore}$  = Prevailing Royalty Rate on the Fe ore

There is a regime shift in ferrous royalty since 2012. Prior to 2012, the Fe royalty was estimated on the basis of tonnage method. The grade percent was different for ore lumps and fines, and also within each category. The recent royalty rate for iron is as high as 15 per cent *ad valorem* of national benchmark (IBM) price. The mining royalty proceeds can be obtained from the Finance Accounts data.

$$R_{ROM} = [\lambda * ROM] * [\alpha P_{IBM}] * Y_{ore}$$

$R_{ROM}$  = Royalty revenue from metal contained in the ore

$\lambda$  = Grade percent of Metal in the extracted ore

ROM = Tonnage of Run of Mine (ROM) Ore Treated

$P_{IBM}$  = IBM Fe Prices

$Y_{ore}$  = Prevailing Royalty Rate on the Fe ore

We have explored two data sources to arrive at the fiscal proceeds from mining sector: Finance Accounts and individual State Budgets. As the Finance Accounts data do not contain the mining proceeds at disaggregated levels, we have explored the State Budget documents to extract the disaggregated budget heads related to mining using a recent methodology of "budget tagging"<sup>2</sup>. The budget tagging analysis intends to identify the budget codes that are relevant to mining actions; and report such revenue heads related to mining operations. However, the negative inferences from this exercise reinforced that the fiscal space from mining to State exchequer is negligible, less than 10 per cent, in both new states and no relevant budget heads with appropriations are available at disaggregated levels in the State Budgets, other than what is reported in Finance Accounts.

Methodologically, we have used an encompassing criteria for selecting the "mining tags" in the revenue budget of the States, incorporating different phases of mining operations, viz., prospecting (which involves reconnaissance and detailed exploration), development and operation. For instance, this analysis defines mining revenues from different phases of mining, viz., (i) reconnaissance permit fee, (ii) prospecting fee, (iii) dead rent, (iv) royalties and some other levies are levied at the different stages of a mining operation. However, the inference from the budget tagging analysis revealed that the time series data on revenue from tax and nontax sources other than mining royalty and fees is not available in the budget documents<sup>3</sup>.

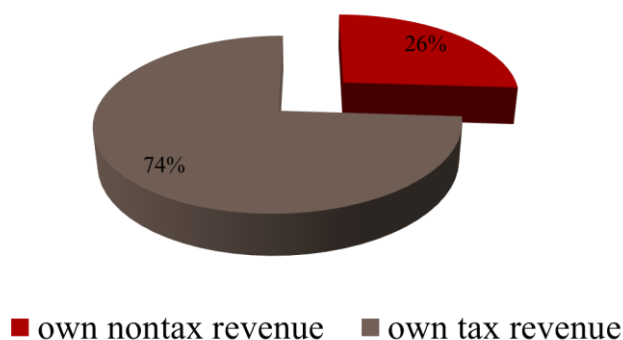
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<sup>2</sup> The budget tagging is a recent methodology used to prepare climate responsive budgeting (CRB). However in CRB, the tagging is confined to expenditure budgets.

<sup>33</sup> The taxes (direct and indirect) collected from mining firms are unavailable in budget documents. We have therefore collated the details of direct and indirect taxes paid by the mining companies from the PROWESS CMIE dataset.

We have therefore decided to use Finance Accounts data, as the disaggregation exercise using the budget tagging methodology to identify the “mining tags” left us with insignificant additional inferences. This disaggregated exploration is also not helpful to analyse the link between fiscal proceeds from mining and its utilisation on local area development and rehabilitation. There is no proceeds under mining in the State budgets, earmarked so far to redress spatial or human inequalities. This is not to understate the relevance of budget tagging methodology, all we wanted to highlight is the irrelevance of this methodology in identifying mining tags. However, the new policy formulation based on DMF in MMDR Act 2015 is in anvil to link the mining proceeds to the benefit of local populace, and the DMF provisions could be a plausible budget head to study such links in future.

**Figure 1: STRUCTURE OF OWN REVENUE: CHHATTISGARH**

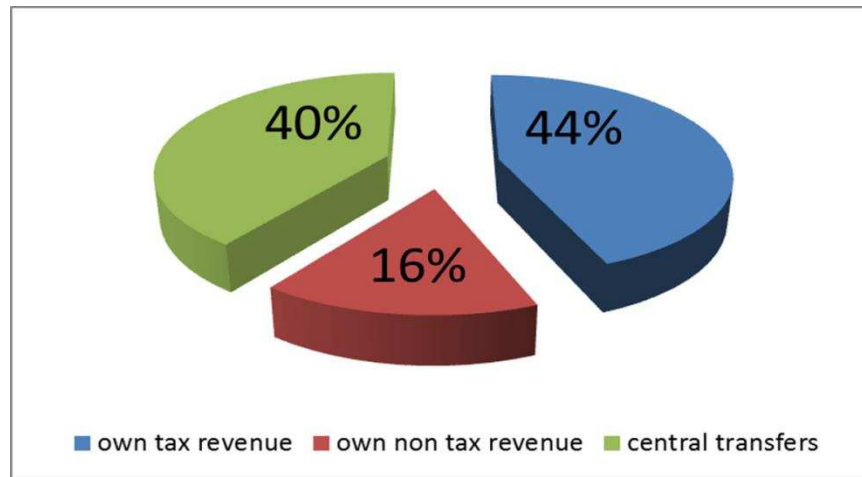


*Source: Govt of India, Finance Accounts, Chhattisgarh (2012-13)*

Using the time series data from Finance Accounts, we deciphered that in Chhattisgarh, mining revenue constitute around 18 per cent of state’s own revenue. Within the nontax revenue, mining proceeds form 68 per cent of own non-tax revenue in 2012-13. However, the own non tax forms only 26 per cent of total own revenue (Figure 1). These ratios need interpretation in the context that 40 per cent of State total revenue receipts constitute of central transfers (Figure 2).



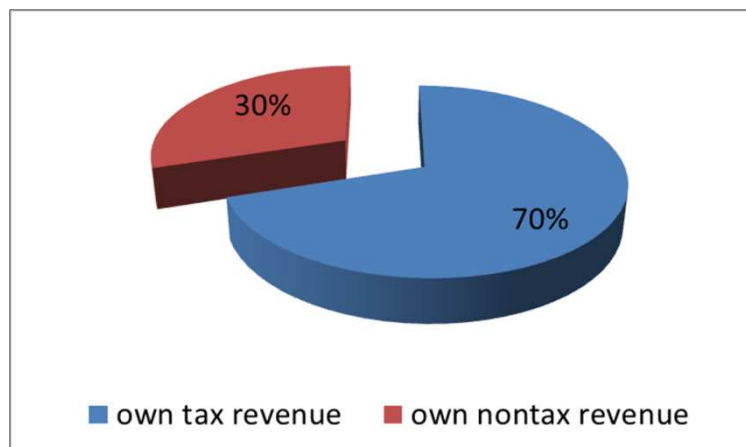
**Figure 2: STRUCTURE OF REVENUE: CHHATTISGARH**



*Source : Govt of India, Finance Accounts, Chhattisgarh (2012-13)*

Linking of fiscal proceeds to the ‘use of proceeds’ is difficult to map, as it is not yet earmarked for any specific purpose, though MMDR 2015 gives indications of linking it through creating DMF. However, broadly we can suggest that mining royalty finances only 11.55 % of revenue expenditure in Chhattisgarh, in 2012-13.

**Figure 3: STRUCTURE OF OWN REVENUE: JHARKHAND**



*Source : Govt of India, Finance Accounts, Jharkhand (2012-13)*

Jharkhand is the country's most mineral-intensive state, with mining and quarrying accounting for around 88 per cent of the own non tax revenue of the State. However, the own non tax revenue forms only 30 per cent of the own revenue kit (Figure 3). Mining royalty finances only 13.43 % of revenue expenditure in Jharkhand. The detail analysis of fiscal profile of mining sector of the mineral rich states in India can be obtained from Chakraborty (2015).

### III. EFFECT OF MINING REGIME ON ECONOMIC GROWTH

The onerous mining taxation and royalty regime can have repercussions on economic growth. The contribution of mining sector to the economic growth has been on the decline. The industrial sector in India consists of three sub-sectors: (i) manufacturing, (ii) mining and quarrying and (iii) electricity, gas and water supply. During the year 2013-14, the share of the industry sector in Gross Domestic Product (GDP) was about 26.1 per cent and the 'mining and quarrying' sub-sector had a contribution of 1.9 per cent (Table 1). Mining sector provides basic and strategic raw materials for the production of a wide range of industrial and consumer products, military and transport equipment, infrastructure, energy, communications and many other essential services.

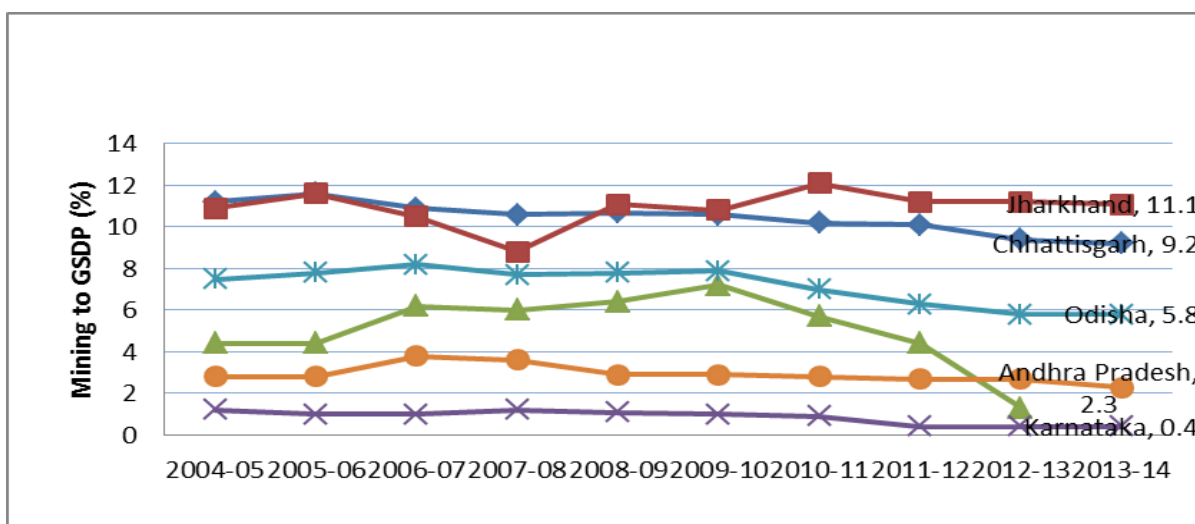
**Table 1: SHARE OF MINING SECTOR IN GDP (PER CENT)**

<b>Sector</b>	<b>1999-2000</b>	<b>2007-08</b>	<b>2012-13</b>	<b>2013-14(P)</b>
Agriculture & allied	23.2	16.8	13.9	13.9
Industry	26.8	28.7	27.3	26.1
1. Mining and quarrying	3	2.5	2	1.9
2. Manufacturing	15	16.1	15.8	14.9
3. Registered Manufacturing	9.2	10.7	11.2	NA
4. Unregistered Manufacturing	5.8	5.4	4.5	NA
Services	50	54.4	58.8	59.9
1. Trade, hotels, transport, and communication	21.2	25.9	26.9	26.4
2. Financing, insurance, real estate, and business services	14.5	16.1	19.1	20.6
3. Community, social, and personal services	14.4	12.4	12.8	12.9

*Source: Economic Survey 2013-14.*

The contribution of mining sector to the regional economies has also been on the decline (Figure 4). The declining trend of share of mining sector in the GSDP across States affects the manufacturing sector of the country. The Figure 4 revealed that Jharkhand and Chhattisgarh are consistent performers since 2004-05 with an average contribution of around 10% between 2004-05 and 2013-14. Goa is on a declining trend since 2009-10, despite having significant contribution from the sector between 2004-05 and 2008-09. Odisha is also on a declining trend since 2010-11, despite having significant contribution from the sector between 2004-05 and 2009-10.

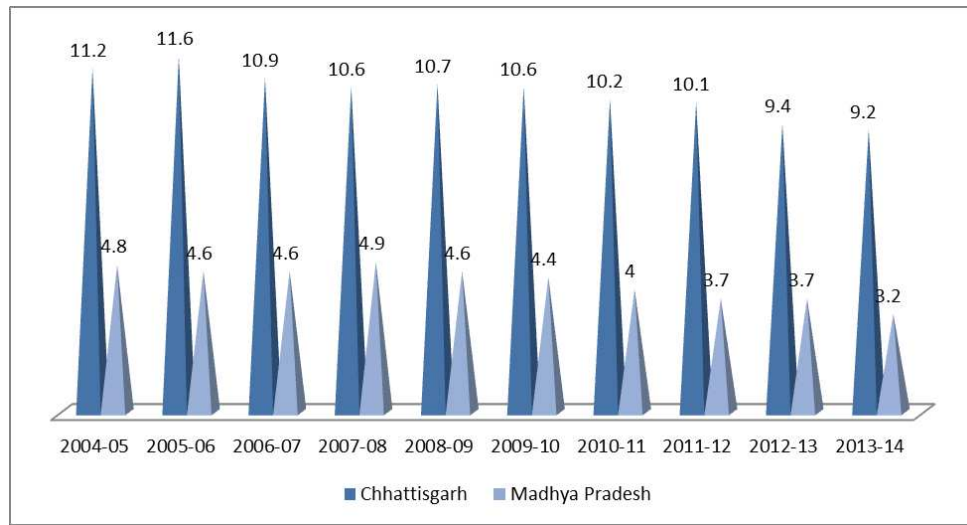
**Figure 4: SHARE OF MINING AND QUARRYING IN GSDP-STATE-WISE (2004-05 PRICES)**



Source: CSO, Govt of India (various years)

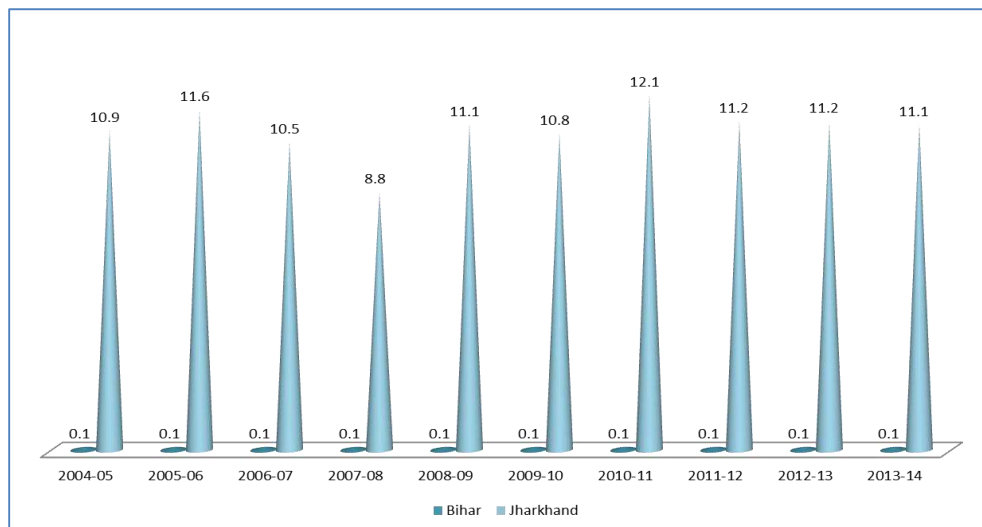
After the bifurcation of States, the new States gained in terms of mining than the parental states in case of both Bihar-Jharkhand and Madhya Pradesh-Chhattisgarh. However, empirical evidences do not suggest that creation of new states led to any distinctive fiscal agency, in terms of enhancing the fiscal autonomy from mining proceeds as both States rely around half of their revenue from intergovernmental fiscal transfers. The Figure 5 revealed that Bihar has not seen a change in share since 2004-05, i.e. 0.1% of GSDP, while Figure 6 revealed that Madhya Pradesh is on a declining trend since 2010-11, despite having significant contribution from the sector between 2004-05 and 2009-10. Both Jharkhand and Chhattisgarh – the new States – gained in terms of mining compared to the parent states.

**Figure 5: MINING TO GSDP RATIO: BIFURCATED MADHYA PRADESH AND CHHATTISGARH**



Source: CSO, Govt of India (various years)

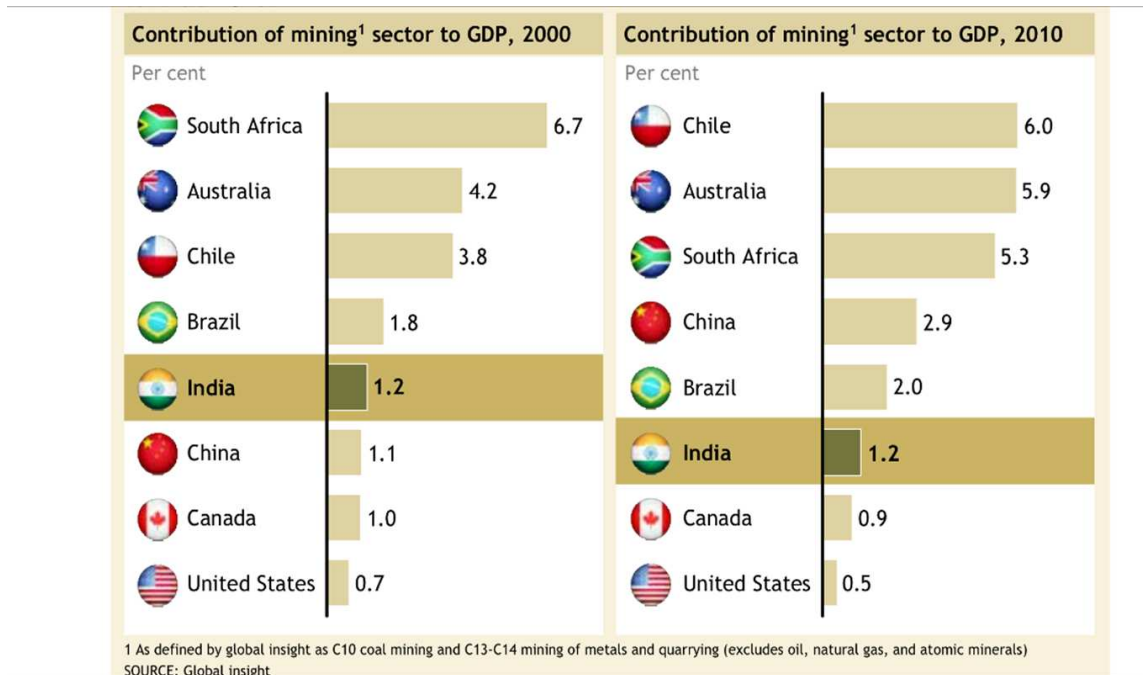
**Figure 3: MINING TO GSDP RATIO: BIFURCATED BIHAR AND JHARKHAND**



Source: CSO, Govt of India (various years)

The contribution of mining to GSDP at 10 per cent is comparatively higher, in terms of intra-national (with other mineral rich States in India) and international comparison. The cross country evidence revealed that resource-rich contributes only below 10 per cent of GSDP with Chile (6 %), Australia (5.9%) and South Africa (5.3 %) in 2010.

**Figure 4: CROSS-COUNTRY RATIOS: MINING TO GDP (%)**



*Source: Strategy Paper, Ministry of Mines, Govt of India, 2011*

The strategy paper of Ministry of Mines (2011) noted that the proceeds from mining in the two new States – Chhattisgarh and Jharkhand would be comparatively more than other mineral rich States and forecasted that contribution from this sector could go up to 20.0 and 14.1 per cent respectively by 2025.

#### **IV. EFFECT OF MINING ON SOCIOECONOMIC OUTCOMES: DISTRICT LEVEL ANALYSIS**

The empirical analysis of impact of mining activity on the socioeconomic development of the region is an elusive area of research. While several studies analyzed the resource curse problem from national economy’s perspective, a few studies have attempted to look for the problem of resource-curse at the disaggregated level of district. A Policy Research Working Paper of the World Bank (Loayza et al, 2013) shows that mining activity in Peru has had a positive impact on local communities in terms of higher economic growth and a better performance on human

development indicators. The analysis tries to compare the performance of a mining district with a non-mining district in the same mineral producing province and non-mining in the non-mineral producing province. The analysis reveals higher inequalities across districts stemming from the relatively better performance of the producing district, which counteracts the benefits and becomes a potential source of societal tensions. The alleviated poverty levels persist despite the redistributive programmes to uplift the local communities.

Another study is in the Indian context that attempts to do a district-level analysis of the Maoist conflict in India (Hoelscher et al, 2012). The major finding of their study is that the districts with the highest percentage of SC/ST population are the most affected by Maoist operations. Most socio-economic and government capacity factors only marginally explain the conflict issue. The relationship between mining and violence is observed to be positive, but is weak. The findings also revealed that it is not a lack of development per se that triggers conflict, but the development that disregards the interests of the most vulnerable inhabitants of land and provides no safeguard against corruption or other illegal and unjust practices. The extensive literature on civil conflict cites strong illustrations of civil conflicts originating from appropriation of rents from natural resources that impedes economic growth and severely impairs the economic and socio-political environment of the country in the long-run (Ross, 2004a, 2004b; de Soysa and Binningsbø, 2009).

Mapping the incidence of mineral resource holding and the six World Governance Indicators - voice and accountability, political stability and absence of violence, government ineffectiveness, regulatory quality, control of corruption and rule of law - across the regions of the globe, one is bound to see striking overlaps. A significant number of resource-abundant Sub-Saharan African, certain Latin American and Middle Eastern nations are placed in the lowest percentile on all six indicators. Empirical evidences across globe suggests that it seems to be a case where the availability of natural wealth has become the main source of economic and political instability; of foreign private and public competitiveness; and of rent-seeking behaviour in vulnerable states, with all its accompanying features of attempts at illegal extraction, leading to soaring poverty levels.

Against this backdrop we carry out our preliminary analysis of the socio-economic impacts of mining in the two newly formed resource rich states of Chhattisgarh and Jharkhand. Mineral profile for the states of Chhattisgarh and Jharkhand as on April 1, 2014 for coal and as on April 1,

2010 for other minerals are given in Table 2 and 3. Juxtaposing and analyzing the datasets on mineral wealth along with Table 3 on growth and human development indicators of the two states brings out an interesting finding that the resource-rich states perform badly on the growth and development. Presently, both the states have an HDI value lower than the national average on all three dimensions- education, income and health and they suffer an average loss of 35% and 33% in HDI due to inequality, respectively.

**Table 2: MINERAL PROFILE, CHHATTISGARH**

<b>Mineral</b>	<b>Total resources in Chhattisgarh</b>	<b>Share of the state as a percent of all India reserves</b>
Coal	52533 (million tn)	17.42
Iron ore	3291824 ('000 tn)	18.40
Limestone	8959446 ('000 tn)	5.15
Dolomite	846682 ('000 tn)	10.95
Tin ore	29800703 (tn)	35.59
Tin metal	15486.63 (tn)	15.14

Note: (as on April 1, 2014 for coal and as on April 1, 2010 for other minerals)  
Source: Indian Minerals Yearbook 2013 and Coal Directory of India 2013-14

**Table 3: MINERAL PROFILE, JHARKHAND**

<b>Mineral</b>	<b>Total resources in Jharkhand</b>	<b>Share of the state as a percent of all India reserves (%)</b>
Coal	80716 ('million tn)	26.76
Iron ore	4596620 ('000 tn)	25.71
Copper ore	288126 ('000 tn)	18.49
Bauxite	146323 ('000 tn)	4.21
Graphite	12910869 (tn)	7.48
Kyanite	5708533 (tn)	5.53

*Note: (as on April 1, 2010 for other minerals)*

*Source: Indian Minerals Yearbook 2013 and Coal Directory of India 2013-14*

**Table 4: DEVELOPMENT INDICATORS: CHHATTISGARH AND JHARKHAND**

Indicators	Chhattisgarh	Jharkhand	India
1. Total Population (In Millions)	26	33	1210
2. Net domestic Product (at factor cost) (Rs crores) [For state) Gross Domestic Product (at factor cost) (Rs crores) (For India)]	70309	63297	4493743
3. Sex ratio (females per 1000 males)	991	947	940
4. Literacy rate (%)	71.04	67.63	74.04
5. Human Development Index (HDI)	0.358	0.376	0.467
6. Gender Related Development Index (GDI)	0.542	0.558	0.590
7. Gender Empowerment Measure (GEM)	0.464	0.435	0.495
8. Inequality Adjusted Human Development Index Value (IHDI)	0.291	0.308	0.343
9. Poverty Headcount Ratio (%)	48.7	39.1	29.8
10. Multidimensional Poverty Index (MPI)	0.367	0.441	0.283
11. Prevalence of Underweight Children under 5 years of age (%)	47.6	57.1	42.5

Source: 1, 3-4 - Census of India 2011;

2- RBI Handbook of Statistics on Indian Economy and Economic Survey of India 2010-11;

5- India Human Development Report 2011, IAMR and Planning Commission;

6-7-Gendering Human Development Indices: Gendering Human Development Indices: Recasting the Gender Development Index and Gender Empowerment Measure for India, Ministry of Women and Child Development, GOI;

8- Inequality Adjusted Human Development Index for India's States 2011, UNDP;

9- Tendulkar Committee Report 2009, Planning Commission;

10- MPI data and updates for 2011, OPHI;

11- India State Hunger Index 2009, IFPRI

Despite being endowed with rich reserves of minerals, the states have not been able to utilize its resource wealth to set the trajectory of growth and development. In fact, a closer look at the indicators reveals that the two states are among the poorest performing states in India on human development. But we need to study the data at a district-disaggregated level in order to find the impact of mining on socio-economic outcomes.

The district-level data on four indicators namely, effective literacy rate, infant mortality rate, total fertility rate, and institutional deliveries, are listed below in Table 5 and 6, for the 16 districts of Chhattisgarh and 18 districts of Jharkhand respectively. So for the purpose of finding the worst pockets, those districts have been selected that perform worse than the respective state figures. Not only does this reflect the intra-state spatial inequalities but also brings to the table the dire need of policy measures to alleviate the existing gaps on the development in order to achieve inclusive growth. Those figures are highlighted under each indicator where the performance is



worse than the respective state average. We observed that more than half of the districts in each state lag far behind on development where the infrastructure for the provision of basic health and education facilities seems to be in a shambles. Extending the analysis further, the districts with the highest share of Scheduled Tribe (ST) population (highlighted figures under last columns of Table 5 and 6) are also seen to be the districts which are the among the worst performers on the above mentioned four indicators, with an exception of the district of Bastar and Korba in Chhattisgarh, and the districts of Ranchi and Purbi (East) Singhbhum in Jharkhand. The ST population, mostly rural dwellers, lives in relatively isolated and inaccessible areas and is highly deprived and marginalized. In fact, eight of the tribal groups of the state of Jharkhand namely; Asur, Birhor, Birajia, Korwa, Savar, Pahariya (Baiga), Mal Pahariya and Souriya Pahariya have been declared as particularly vulnerable tribal Groups (PTGs). They live in small, dispersed and inaccessible habitations (Economic Survey of Jharkhand 2013-14). The districts identified are mineral-abundant and the following table shows their mineral wealth profile.

**Table 5: DISTRICT-WISE HUMAN DEVELOPMENT INDICATORS, CHHATTISGARH**

<b>Districts</b>	<b>Infant Mortality Rate (IMR)</b>	<b>Total Fertility Rate (TFR)</b>	<b>Effective Literacy Rate (%)</b>	<b>Institutional Delivery (%)</b>	<b>% of ST Population</b>
Bastar	40	2.5	66.3	67.1	11.9
Bilaspur	38	2.9	78.8	28.2	6.4
Dantewada	44	2.7	52.3	49.7	5.2
Dhamtari	47	2.5	84.3	52.2	2.7
Durg	35	2.3	83.5	39.9	5.1
Janjgir-Champa	46	2.6	77.1	27.1	2.4
Jashpur	56	2.8	71.3	37.8	6.8
Kanker	46	2.3	81.4	68.4	5.3
Kawardha	57	3.6	72.3	23.8	2.1
Korba	48	2.5	79.7	42.6	6.3
Koriya	52	2.3	74.8	40.1	3.9
Mahasamund	57	2.8	76	49.5	3.6
Raigarh	55	2.5	75.8	42.2	6.5
Raipur	45	2.9	78.6	34.5	6.1
Rajnandgaon	49	2.8	81.7	43.5	5.2
Surguja	50	3.2	68.7	32.0	16.6
Chhattisgarh	46	2.7	76.4	39.5	100.0

Source: Annual Health Survey 2012-13 Factsheet, Chhattisgarh, and State Primary Census Abstract 2011

**Table 6: DISTRICT-WISE HUMAN DEVELOPMENT INDICATORS, JHARKHAND**

<b>Districts</b>	<b>Infant Mortality Ratio (IMR)</b>	<b>Total Fertility Rate (TFR)</b>	<b>Effective Literacy Rate (%)</b>	<b>Institutional Delivery (%)</b>	<b>% of ST Population</b>
Bokaro	28	2.6	79.0	54.8	5.90
Chatra	42	3.0	69.9	35.6	1.05
Deoghar	31	2.5	72.0	39.0	4.18
Dhanbad	26	2.7	79.4	52.0	5.38
Dumka	45	3.0	66.7	28.8	13.19
Garhwa	33	3.0	67.4	39.2	2.34
Giridih	28	2.5	69.2	35.1	5.50
Godda	54	3.0	63.3	31.2	6.45
Gumla	45	3.5	70.9	45.7	16.32
Hazaribagh	29	2.3	76.5	54.2	2.81
Kodarma	27	2.7	73.9	54.9	0.16
Lohardaga	53	3.7	74.0	54.7	6.07
Pakaur	52	3.7	59.3	27.7	8.75
Palamu	40	2.9	69.4	39.3	4.19
Pashchimi Singhbhum Purbi	53	3.1	67.6	38.5	23.36
Singhbhum	25	2.2	78.7	70.0	15.10
Ranchi	30	2.7	82.3	64.2	24.07
Sahibganj	52	3.0	63.5	29.5	7.12
Jharkhand	36	2.7	73.3	46.2	100.00

Source: Annual Health Survey 2012-13 Factsheet, Jharkhand, and State Primary Census Abstract 2011

**Table 7: MINERAL WEALTH PROFILE FOR A FEW SELECT DISTRICTS OF THE TWO STATES**

	<b>Highest ST Population</b>	<b>Mineral wealth</b>	<b>Highest ST Population</b>	<b>Mineral wealth</b>
<b>Chhattisgarh</b>	Surguja	bauxite, dolomite	Pashchimi Singhbhum	bauxite, china clay, fire clay, iron ore, quartz, limestone, manganese ore, kyanite
	Bastar	bauxite, iron ore, dolomite, limestone, granite, tin, garnet, marble	Gumla	bauxite, iron ore, granite
	Jashpur	bauxite, quartz	Dumka	bauxite, china clay, fire clay, quartz, graphite, felspar
	Raigarh	bauxite, coal, dolomite, limestone, quartz, china clay, fire clay	Pakaur	coal, bentonite
	Bilaspur	bauxite, dolomite, limestone, fire clay	Sahibganj	china clay, quartz, bentonite
	Korba	bauxite, coal	Godda	coal, fire clay, quartz, granite

*Source: Indian Minerals Yearbook 2013*

This reveals a preliminary evidence that the extensive mining activities carried out in the districts have not yielded socio-economic gains to the districts and the finding is contrary from the results given in literature that supports higher economic performance for the mining districts (Loayza et al, 2013) and the reason for the same can be the complex interplay of economic, social and political factors operational in the Indian context. We attempt to explore these reasons in the next section.

## **V. WHY RESOURCE CURSE?**

The finding in the preceding section is certainly an illustration of what is termed as ‘resource curse’ i.e. the abundance of resources does not translate into improved growth and development of the regions endowed with the mineral wealth. The reasons that can be identified for the abysmal performance of the resource-rich districts could be inadequate investment in

building up the requisite physical and human infrastructure, the presence of crony capitalism that perpetuates corruption and siphons resources off the state, and the persisting problem of “conflict”.

Exploring further into these reasons show that the problem faced by the states is resource curse and, to be more specific, resource (mis)appropriation. It is also significant to analyse the effectiveness of public spending on health and education in the state and also for rural development especially when the states have a significantly high rural population, around 76 per cent for both the states (for details, see Economic Survey 2013, Jharkhand and Chhattisgarh).

### *V.1: Crony Capitalism*

Conceptually, crony capitalism is a ‘regulatory-capture collusion’ (Bo, 2006; Albino et al, 2013). A phenomenon plaguing the Indian economy, the mining sector in particular, is crony capitalism. Despite efforts to bring increased accountability and transparency to functioning at all levels of the economy, the official announcement of the recent losses to the extent of Rs 1.86 lakh crores in allocation of coal blocks since 1993 (Report of the Comptroller and Auditor General (CAG) of India). This is a reflection of the extent of crony capitalism. Not only are rules and laws completely overlooked or compromised with, such practices increase the extent of elite capture through rampant rent-seeking. The wealth from such rent-seeking activities is then used to distort decisions in the allocation of resources, in a lure of potentially higher wealth generation from such allocations in future.

In the context of the mining sector, the recent scandal in allocation of 216 coal blocks since 1993 points to the state of affairs where principles were sacrificed in distributing national wealth, to meet the vested interests. The mineral under scrutiny was coal, which serves more than half of the electricity needs of the country and is important in manufacture of cement, steel and other manufacturing products. What is even striking is that despite holding substantial reserves of coal, the country continues to rely on imports to an extent of 20-25 per cent in recent years, in order to meet its total requirements (Ministry of Coal, Government of India).

Even though efforts were made to allocate coal blocks in a transparent manner through open competitive bidding in public auctions, the end results (now exposed) amounted to severe losses to the exchequer (Reports from the Special CBI court judgment, 2015). Stemming from such unfair corporate practices is illegal mining activities being conducted in the resource-

abundant states of Jharkhand, Chhattisgarh, Andhra Pradesh, Madhya Pradesh, Bihar, Odisha, West Bengal and Maharashtra. The revenues generated are funding the armed insurgency operations (Ministry of Home Affairs, Government of India) while also causing loss in coal production that has a direct bearing on infrastructure development in the country. An annual loss to the extent of 3 mt is suffered by Coal India Limited (CIL) due to mining activities interrupted by Naxal violence<sup>4</sup>.

### *V.2: Conflict*

The logic of accumulation by dispossession is one of the plausible reasons for the problem of “conflict” in the newly created states of Jharkhand and Chhattisgarh. The roots of the problem can be traced to the displacement of local inhabitants of land endowed with rich mineral resources, without due compensation and provision of decent livelihood opportunities.

Mining-induced displacement and resettlement (MIDR) poses major risks to societal sustainability and this was getting increasingly recognized in policy circles. To cite World Bank (2001), “(i)nvolutionary resettlement under development projects, if unmitigated, often gives rise to severe economic, social and environmental risks: productive systems are dismantled; people face impoverishment when their productive assets or income sources are lost; people are relocated to environments where their productive skills may be less applicable and the competition for resources greater; community institutions and social networks are weakened; kin groups are dispersed; and cultural identity, traditional authority, and the potential for mutual help are diminished or lost”. Table 8 presents a snapshot of the fatalities reported from Naxal conflict in the period 2008 to 2012.

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<sup>4</sup> Reports from Coal India Limited

**Table 8: STATE-WISE DATA ON CONFLICT, 2008- 2012**

States	2008		2009		2010		2011		2012	
	I	D	I	D	I	D	I	D	I	D
<b>Chhattisgarh</b>	620	242	529	432	625	426	465	238	370	147
<b>Jharkhand</b>	484	207	742	239	501	172	517	198	480	170
<b>Bihar</b>	164	73	232	72	307	97	316	63	166	44
<b>Odisha</b>	103	101	266	67	218	79	192	53	171	45
<b>Andhra Pradesh</b>	92	46	66	18	100	24	54	9	67	13
<b>Maharashtra</b>	68	22	154	93	94	49	109	54	134	41
<b>West Bengal</b>	35	26	255	158	350	258	92	45	6	0
<b>Madhya Pradesh</b>	7	0	1	0	7	1	8	0	11	0
<b>Uttar Pradesh</b>	4	0	8	2	6	1	1	0	1	0
<b>Others</b>	14	4	5	0	5	0	6	1	8	0
<b>Total</b>	<b>1591</b>	<b>721</b>	<b>2258</b>	<b>1081</b>	<b>2213</b>	<b>1107</b>	<b>1760</b>	<b>661</b>	<b>1408</b>	<b>460</b>

Note: (I: Incidents, D: Deaths)

Source: Government of India (2009-2013), Ministry of Home Affairs.

Though the incidences and deaths in absolute numbers have been on a decline over the years (increased deployment of police personnel, willful surrender of Maoists in the recent times, etc.), the numbers deserve seriousness from all quarters. In the four years from 2008-12, over 8000 incidents with more than 4000 deaths have transpired as a result of this armed insurgency. The states of Chhattisgarh and Jharkhand are the most affected by Maoist activities as they are also the states with the highest share of mineral wealth. In continuation with Table 10, Table 11 and 12 present the findings for Maoist conflict in the states of Chhattisgarh and Jharkhand that are adversely inflicted with Naxalism.

**Table 11: CONFLICT IN CHHATTISGARH, INCIDENTS AND MORTALITY: 2009-2013**

<b>Years</b>	<b>Incidents</b>	<b>Civilians killed</b>	<b>Security Force personnel killed</b>	<b>Left Wing Extremists killed</b>	<b>Total killed</b>
<b>2009</b>	529	163	127	142	432
<b>2010</b>	625	171	172	83	426
<b>2011</b>	465	124	80	34	238
<b>2012</b>	370	63	46	38	147
<b>2013</b>	353	66	44	38	148

Source: Government of India (2009-2013), Ministry of Home Affairs.

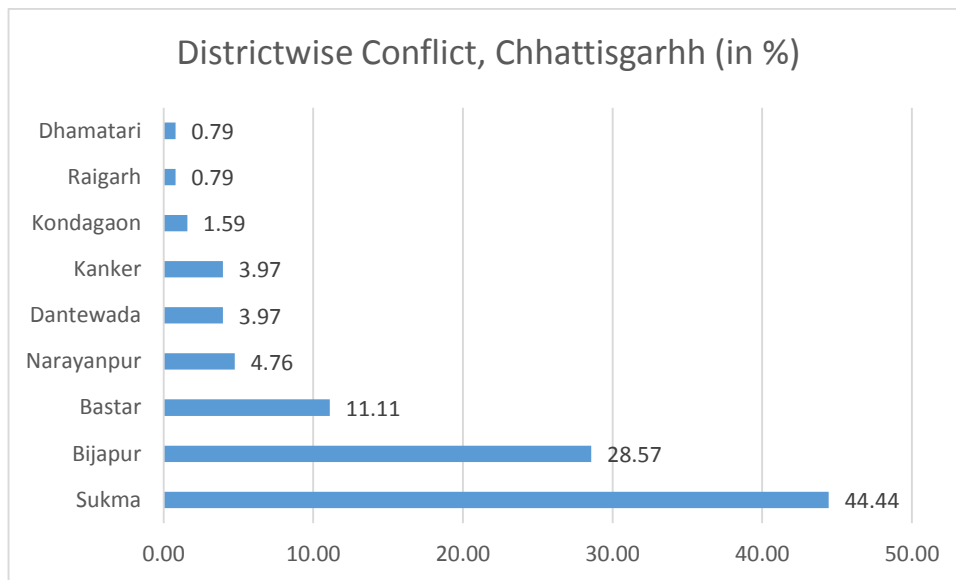
**Table 12: CONFLICT IN JHARKHAND: INCIDENTS AND MORTALITY, 2009-2013**

<b>Years</b>	<b>Incidents</b>	<b>Civilians killed</b>	<b>Security Force personnel killed</b>	<b>Left Wing Extremists killed</b>	<b>Total killed</b>
<b>2009</b>	742	140	68	31	239
<b>2010</b>	501	132	25	15	172
<b>2011</b>	517	149	33	16	198
<b>2012</b>	480	134	29	7	170
<b>2013</b>	383	120	30	12	162

Source: Government of India (2009-2013), Ministry of Home Affairs.

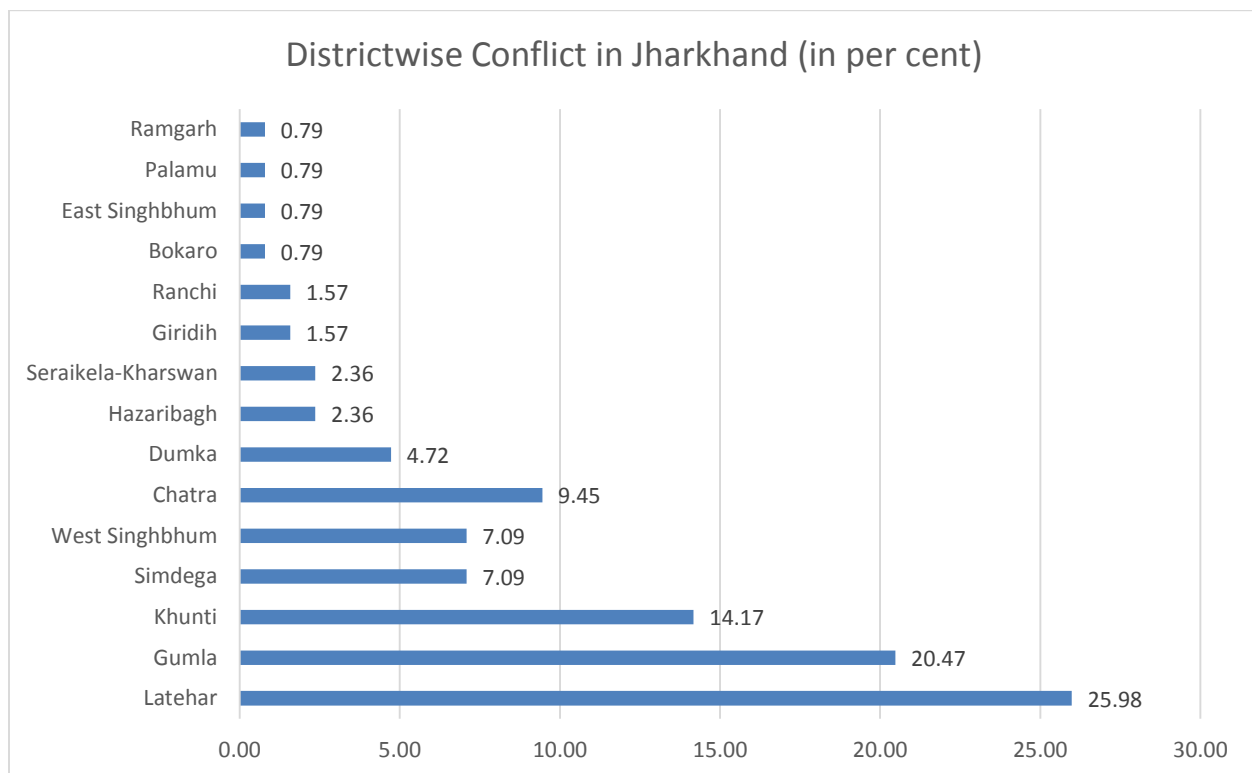
A district-level analysis of the conflict (over ground and massive underground operations) are given in Figure 5 and 6. A lot of the districts with the highest fatalities are in fact the ones identified in the preceding section which were among the poorest performers on most human development indicators and also had a relatively higher share of the ST population. Of the total conflicts in Chhattisgarh, 44.44 per cent occurred in district Sukma (in South Bastar region) in 2013 (Figure 5). Similarly, in Jharkhand, out of total conflicts in 2013, 21 per cent occurred in Gumla and 26 per cent occurred in Latehar. The findings on conflict from figures 5 and 6 are consistent with the finding in literature the strongest correlates of Maoist violence are those districts where ST populations form the highest percentages of population (Hoelscher et al, 2012).

**Figure 5: Conflict Mortality in Chhattisgarh, District-wise Analysis (in %): 2013**



Source: Government of India (2013), Ministry of Home Affairs.

**Figure 6: Conflict Mortality in Jharkhand, District-wise Analysis (in %): 2013**



Source: Government of India (2013), Ministry of Home Affairs.



It also validates our argument that in the absence of a judicious public policy, the resource abundance becomes a cause of distress and manifests into incidences of civil conflicts. Increased mining operations fuels further conflicts by aggravating the existing problems.

## **VI. RECENT MINING INDUSTRIAL POLICY (MMDR 2015) TO RESOLVE RESOURCE CURSE**

The Mines and Minerals (Development and Regulation) Amendment Act, 2015 stipulates creation of fiscal space to resolve the resource curse. Specifically, the section 9(B) of the Act states that, in any district affected by mining related operations, the State Government shall, establish District Mineral Foundation (DMF) with the objective of working for benefit of persons, and areas affected by mining operations.

As mentioned in section II of the paper, to ensure that the mining district gets its due share, the Act mandates the holder of a mining lease to pay to the DMF, in addition to the royalty, an amount which is equivalent to such percentage of the royalty paid, not exceeding one-third of royalty. Chhattisgarh and Jharkhand are one of the few states where contribution of mining sector to the GSDP is relatively higher than other states and also expected to increase in future (Strategy Paper for Ministry of Mines, 2011). MMDR 2015 also stipulates that the proceeds from coal e-auctioning should also be linked to DMF. There are ambiguities regarding the process of linking the fiscal space generated from coal auctions to redress spatial inequalities. However, the MMDR 2015 policy announcements call for creating fiscal space and utilizing it to solve the problem of resource curse<sup>5</sup>.

### *VI.1: Nascent Estimates of Coal Auction Proceeds*

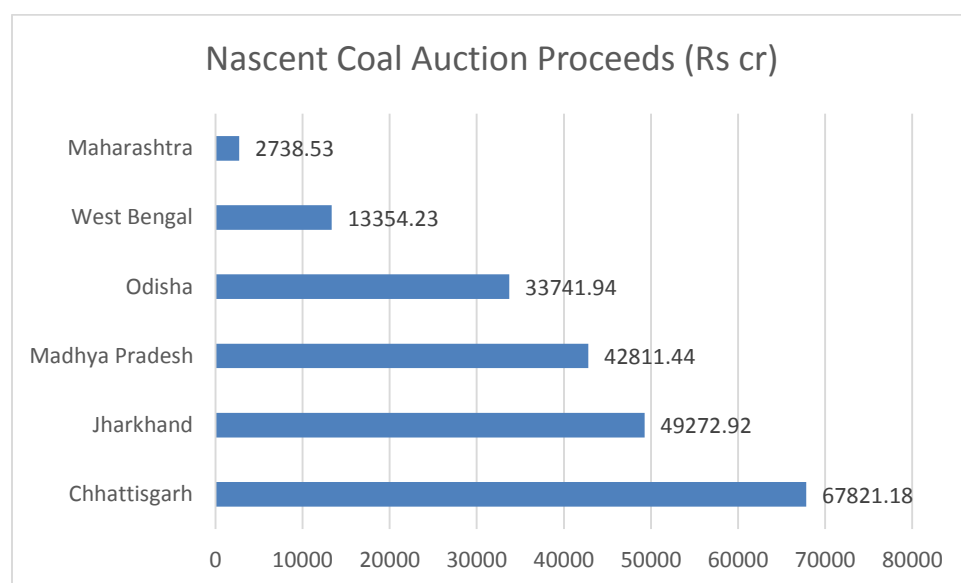
The Coal Mines (Special Provisions) Act, 2015 has been implemented and aims at creating more fiscal space for the mining sector. Three rounds of coal auctions have been completed in India

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<sup>55</sup> Pursuant to the judgments, guidelines were laid down for e-auction of Schedule II and Schedule III coal mines. Schedule II coal mines are 42 of the 204 cancelled blocks (redefined as Schedule I coal blocks/mines) that are 'Producing' and 'Ready to produce' coal mines. Schedule III coal mines are the other 32 substantially developed of the Schedule I coal mines, meant for specified end-use, and the Central Government may add any other Schedule I coal mine for the purposes of specified end-use in this category, in public interest (for details, see The Coal Mines (Special provisions) Act, 2015). **The Coal Auction Methodology** for coal blocks is followed for the two sectors namely, Regulated Sectors and Non-Regulated Sectors (for details, see Approach paper, Auctions, Government of India , 2015 ; and Standard Tender Document, Ministry of Coal, Government of India, 2015).

recently and significant revenue has been generated from the new e-auction process of coal. The nascent estimates from coal auctioning are on board, though nebulous estimates (Figure 7).

**Figure 7: Nascent Coal e-Auction Estimates (First and Second rounds), 2015**



*Source: Coal Ministry, Government of India (2015)*

There is considerable ambiguity of how these proceeds would appear in the State government budgets next year, and therefore further analysis based on these new coal mining proceeds would be carried out ex-post to the next budget cycle. However, a preliminary estimate of the state-wise share in coal auctions from the first two rounds of e-auctions are presented in Table 13, collated from the documents published by Ministry of Coal, Government of India<sup>6</sup>.

<sup>6</sup> It is reported that from the third round where only 3 out of the 10 planned mines were e-auctioned, a total of Rs. 4364 Crores is expected to have been added to government's revenue (The Hindu, August 14, 2015).

**Table 13: NASCENT ESTIMATES: STATE-WISE DISTRIBUTION (%) OF COAL MINING AUCTION PROCEEDS, 2015**

States	e-auction proceeds to host state	Royalty proceeds to host state	Upfront payment (10% of intrinsic value)	Total proceeds
Chhattisgarh	32.77	29.57	23.30	32.34
Jharkhand	23.48	23.43	27.10	23.49
Madhya Pradesh	20.73	18.49	11.01	20.41
Odisha	15.67	18.79	24.67	16.09
West Bengal	6.10	8.02	12.92	6.37
Maharashtra	1.25	1.69	1.00	1.31
Total	100	100	100	100

*Source: Coal Ministry, Government of India (2015)*

As is brought out clearly from the Table 13, the six coal-rich states, especially Chhattisgarh<sup>7</sup> and Jharkhand, are expected to benefit significantly from the proceeds of coal auctions. This expanded fiscal space from coal auction proceeds can contribute in reducing the social infrastructure deficit of the states. While the e-auction procedure has so far been transparent and fetched a fair amount of revenue to the government, there have been complaints regarding “cartelization” in bidding.

India has adopted the e-auction route that is practiced in other countries including USA and Indonesia. However, as India has onerous royalty regime and one of the highest royalty rates in the world, linking the auction procedure to royalty can be detrimental to the competitiveness of the sector and in turn revenue argumentation to the State exchequer in the long run.

Having said that, the policy initiative to link the fiscal space from mining proceeds to the spatial and human development is a positive step to redress the inequalities, and for inclusive development process. This is theoretically comparable to the “oil-to-cash policy” initiative implemented in Uganda (Moss and Majerowicz, 2013). In Uganda, a certain proportion of the

<sup>7</sup> Of the three blocks successfully auctioned, Chhattisgarh’s Bhaskarpara mine is expected to fetch Rs.712 Crores to the State.

government receipts from oil revenues are transferred instantly to the bank accounts of families via mobile network, after deducting a small tax share. The aim is to create a participatory approach whereby oil becomes a common property and an active constituency of citizens is created. And international cross-country studies have strong evidence that such revenue proceeds linked to redress capability deprivation are usually spent on healthcare, education and opening of small enterprises.

## **VII. CONCLUSION**

We examined the political economy context of the newly generated fiscal space from e-auction mining proceeds in India and its intended use to redress the resource curse problem. Such policy imperatives are comparable to the global initiatives like recent “oil-to-cash policy”. Within the constraints of data paucity, our analysis cautions that existing roadmap of DMF (MMDR, 2015) to plough back a portion of royalty and fresh e-auction mining proceeds exclusively to the mining districts may exacerbate spatial inequalities.

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