

Political-Economy of Mining: A Case Study of India and Brazil.

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Mining is an enterprise in which humanity has indulged itself since antiquity. Resource extraction from the resource-rich areas on the earth in the form of precious minerals, ores, etc. has been taking place for long though hardly ever in a fair and just manner. Most of the times, it is the powerful and the ruling who initiated this activity in the areas rich in resources for their own strategic benefits for the sheer reason that these activities needed the power and knowledge of the basic geographic locations and other geological data needed to trace the availability of the huge resources in many unexplored and undeveloped corners of the world. It was precisely because of this reason that colonialism became the most important driving force in stripping off many of the resource-rich regions of their natural wealth for it brought many of the yet undiscovered areas before the already industrialising, modernising world which needed minerals and metals to sustain their increasing needs for the ever growing industrial plants and expanding markets. The colonial history as we all are aware is a brutal period of suffering and mass plunder. Colonialism entailed plundering of the local wealth in the far-flung areas of Africa, Latin America and Asia. It involved the payment of huge costs by the locals in the form of their flesh and blood for the minerals, metals and many other valuable resources like spices, cotton, and sugar. Thus since the very beginning, the areas blessed with resources were actually cursed to be the victims of the powerful in this world. Mining as an activity has thus since its genesis involved unequal power relations for someone has always had to pay the price for this kind of activity and history is full of such stories of extreme exploitation. However this doesn't end at some point of time with the formal ending of colonialism in many of the countries which started in the 1940s and continued till very recently for power resurfaced in the relationship between the now newly independent countries but rich in resources and the former imperial powers who had devised new ways to have the control over these regions.

Mining as a human activity has significance because with it is attached the development of humankind in many ways and mined materials certainly have a critical role in the modern economies. And indeed it is true that historically, and continuing even today in many parts of the world, the mining industry has been responsible for the worse kind of human rights abuses and unnecessarily negative

environmental impacts. Such abuses of human rights are not new and were prevalent even among Romans, who used slave labour in most of their mines and caused severe (if localized) environmental degradation (Richards, 2009).

The purpose of this paper is to highlight the underneath equations of power in the mining industry which has been continuing till date, the difference being that now new actors and new configuration of players have occupied the stage. The paper thus presents the politico-economic interlinkages behind mining as mining being an economic activity has never been confined in its repercussions to just economic sector and its proliferation always demanded and had roots in deep political motives thus making it inevitably an analysis involving politico-economy which seeks to explain how political power shapes economic outcomes and how economic forces influence political action in the case of mining. The paper will present the changed nature of mining in the recent years and mark the patterns of continuity and change from the past. It will then take the issue of development and the changing discourses on development in the context of mining and strive for bringing a case for studying mining in this larger developmental perspective. It will also present the case studies of Eastern India and Brazil to substantiate the points advanced in the study which will focus on the effects on the local livelihoods and environment.

The Nature of Mining, its Impact and Consequences: A General Outline

The key characteristic features of mining as a human enterprise is its dependence on depleting natural resources, and, in some instances, its scale relative to the host economy. According to Crowson (2009:3),

"Mining differs from other industries in the importance of economic rent in their value added. The relative costs of production of the mining industry are dictated not so much by the costs of labour and intermediate goods and services used, as by the characteristics of the underlying resources. Those persist over the life of a project, although potential economic rent can be enhanced by skilful management, or whittled away through mismanagement. A marginal project, whose production costs, including the opportunity cost of its capital, equal its revenues, earns no rent."

Mining is, as many scholars have argued time and again a quintessentially "boom and bust" industry. As suggested by many, mining operations may differ in terms of

the kind of mineral commodities, the abundance of deposits, and operating lifespans, but the depletable nature of mineral deposits almost always results in the termination of the mining-dependent economies (Aschmann, 1970). Changes in the mining industry's nature started being witnessed with the demands and claims of the workers' organizations in the late nineteenth century, who placed a further strain on the profitability of mining operations by claiming a larger share of the return from the mines' output (Lingenfelter, 1974). Although technological innovations in mining and mineral processing and increases in commodity prices have extended the lifespan of mines to an extent, sooner or later all mines cease to be profitable. Closure of mines gives way to the deindustrialization of the mining region caused by the continuous decline in mineral production and employment which could in some cases be accompanied by a rise in alternate industries but this is not a general rule. In reality, the majority of mining areas, no matter howsoever remotely located and poorly diversified have caused serious consequences like economic stagnation and decline following the closure of mines. Mining towns often fail to survive the deindustrialization followed by the closure of mines owing to the fact that mining of the non-renewable minerals constitutes the only industry for the region or the community. It is important to recognize, however, that community annihilation is not an inevitable outcome of mining's demise. In the words of Robertson (2010:3),

"Mining communities often outlast their industrial usefulness. It is a phenomenon that has not been quantified, but the survival of large numbers of American mining towns suggests that many persist in the midst of decay. For these settlements, a mine's closure is followed by a period of economic decline characterized by falling income levels and high rates of unemployment. Significant population loss involving out-migration of younger, working-age residents may also occur. Economic decline and depopulation erode the local tax base, resulting in the loss of public services and a decline in the quality of community infrastructure. Residents of onetime mining towns are typically older and poorer than their rural counterparts, and more often than not their settlements have a worn-out appearance."

The most visible impact of mining is land disturbance. Mining and mineral processing produce at least two kinds of changes on the land surface. The ones associated with mineral extraction which cause shafts, pits, quarries, and subsidence depressions and those associated with deposits of mining, milling, and refining

wastes which leads to piles of overburden and milling waste and deposits of slag and tailings. These land disturbances have the potential to cause drastic alterations in the local topography, drainage systems, and vegetation regimes, and both aquatic and terrestrial habitats tend to suffer long-term harm. Mining also produces a variety of pollutants. The most troublesome are those resulting from the huge bulk of solid waste material that mining and mineral processing typically produce.

Changing Nature of Mining

Mining industry has witnessed plethora of changes where the stakeholders have changed and also the role of native government as the number of players and actors has increased manifold involving the major Transnational corporations, international financial institutions, development oriented and environment NGOs, governments, local communities and mining companies of varying stature and significance. All these players have a stake in the mining industry and the orientation of each is determined by divergent interests.

The role of state has definitely changed in this regard. Mineral resources have always been a coveted source of wealth for countries but the role of states in mining industry has also varied over the period of time and across the world in the form of the kind of strategies employed by the states in accessing this wealth. This has witnessed a change from early twentieth century state which was direct participant in the mining industry through public-sector or state-owned companies whose role declined in the later part of the twentieth century and gave way to the increased role of the private sector soon flooded with the arrival of many multinational companies. Here the role of the state was more of control through taxes levied.

Another important change has been the shift in attention towards the developing countries rich in mineral deposits which are being extracted at a scale and speed never witnessed before. The 1990s especially saw significant shifts in global investment flows in mining, an effect of changes in the national regulatory frameworks of more than 90 countries in the world in the time period that followed (Bridge, 2004). Accompanying this growth in investment in extractive industries has been an equally remarkable surge in social mobilization and conflict in many countries, two important among these being Brazil and India.

Another major change has been on the front of the technical nature of mining which has for reasons good or bad (as debated by scholars) has brought remarkable

changes in the industry itself. Mining used to be labour intensive in the old days dependent upon the muscle power rather than machinery. The requirement of labour, together with the greed for precious metals like gold situated in the gold mining districts led to the migration of the people to the mining areas and to the host countries as in the case of Brazil. The large work forces needed regular supplies of food and basic needs such as housing and clothing, including other more sophisticated products. Thus the development of mines often was accompanied with the expansion in the local economy that, in their initial stages, could only be supplied at great cost and with logistical ingenuity. Crowson (2009) thus argues that this kind of huge demand caused by the immigrant labour force had multiplier effects on employment and incomes of the local economy. In the words of Crowson (2009:32)

"High prices for supplies fostered local production of wide ranges of goods and services, so that the multiplier effects on employment and incomes tended to be relatively large. Once local industry had developed, and especially agriculture and commerce, it commonly became self-perpetuating through its own multiplier effects. The initial participants in the nineteenth century gold rushes needed a minimum of equipment, and the miners themselves often built it. The rough and ready nature of much mining equipment and machinery of the period meant that skilled mechanics or blacksmiths could fix most problems without recourse to overseas expertise or suppliers. Although capital intensity soon rose with the introduction of machinery, that remained relatively easy to maintain by local skilled workers."

The average scale of the new mines has risen evidently since the nineteenth century, with an especially noticeable upsurge since 1990 (Crowson, 2003). The new mining projects are marked by their large scale and capital intensive nature which employ far less workers than the earlier days. Thus unless there is a parallel development of a sufficient number of mines in a given area, the long term labour force is usually inadequate to support much development of local agricultural production or commercial services as used to be the case of labour intensive mining. The areas in which mines are being developed these days are generally are not very receptive to the permanent settlement of the work force as many of the mining districts of the past used to be. Also technical complexity of the very process of mining means that there is much less dependence for local skilled workers or maintenance workshops as in the earlier times. This changed nature of the industry's capital equipment has further reduced the scope for backward linkages between mines and the local economy (Crowford, 2009).

The developments in transport and communications have strengthened the changes and growing complexity in the mining industry as discussed above. The real costs of transportation and of telecommunications have fallen markedly since the Second World War, let alone since the nineteenth century (Crowson 2006). In the past days, mining companies that relied on overseas sources of equipment and supplies had often had to wait several expensive months thus making them naturally and inevitably dependent on the local suppliers. This paved the way for the development of ancillary industries, particularly for repairs and maintenance which consecutively, had multiplier effects on incomes and employment in the local economy (Crowson 2009:33).

However, today the scene has quite reversed because of the fast communications throughout the world. Today the needs and complications of a remote mine can be immediately communicated to equipment suppliers and relevant experts situated even not in the vicinity. Thus the dependence on the local economy has greatly reduced.

In the words of Crowson (Ibid: 34):

"In the structural global economy where the World Bank has been a major proponent of mining and resource development for developing countries, mining has seldom provided such envisaged benefits as direct employment of the local population, because mining recruits few direct employees and, invariably, local inhabitants do not possess the education or skills required to operate and manage a capital intensive mining project. Instead, an assumed multiplier effect is anticipated to create indirect jobs created by the project's existence."

Thus, the very forces which led to globalization have led to the decline in the linkages of the development of local economy and mining in that area. Thus mining mineral deposits seem to have very less likely the multiplier effects on the local economy as was advanced by the supporters of mining in the past. The mining districts have over the years been known to suffer economic decline and depopulation unless alternative sources of wealth creation have developed (Crowson, Ibid). The fundamental issues however remain debatable even with the changing nature of mining which is the degree to which the earnings and rents accrued from mining have been retained within the local economy and invested productively. Also the question or issue concerning the level to which mines are actually able to attract on the host region for their inputs of goods and services is also very pertinent. Thus

the debate on the desirability and necessity of the mining industry over the years continues despite the changing nature of mining industry.

Mining and the Development Debate

Mining as an industry has an associated automatic link with the whole discourse of development which despite its skewed definition and changing meaning over time is an integral part of the repercussions mining brings. Even the staunchest advocates of mining defend its rampant march on the basis of it having positive impact on development patterns in the region. However this whole idea is highly debatable. This section deals with this whole debate surrounding mining and development. Thus it will first try to trace the different ways in which development has been understood and associated with an industry like mining.

Development for a very long time was taken as synonymous for Economic Growth measured in terms of the Gross Domestic Product. A country was deemed to be developing for the reason that its economy was growing through national accounts. There are at least two problems with this economic-centric and aggregating analysis. First it ignores the other vital dimensions of development, namely, sociological and cultural and secondly, economic growth measured in terms of the aggregate variables like gross domestic product does not take into account the impact on internal redistribution and the impact of an industry or activity on the specific social classes within the state or region (O'Brien and Williams, 2004:255).

This narrow conception of development predominated until the mid-twentieth century. Since 1960s the concept of development till now equated with aggregate national growth came to be challenged. And now scholars like Dudley Seers were influential in challenging this notion of development and rather putting strong case for a more multifaceted development rather than the accepted but quite narrow and restrictive growth centred concept of development. Seers insisted that measures of equity as well as social objectives such as health, employment and shelter, should be included in ones understanding of development (Ibid).

The insight provided by Seer and other scholars helped in shifting the debate from purely economic measures of development to a concern with what came to be later known as sustainable development. This shift was reflected in the 1990 Human Development Report which stated that "while growth in national product (GDP) is absolutely necessary to meet all essential human objectives, what is more important

is to study how this growth translates or fails to translate into human development in various societies" (UNDP, 1990). In 1987 the World Commission on Environment and Development defined sustainable development as "development that meets the needs of the present without compromising the ability of the future generations to meet their needs" (WCED, 1987: 8).

However, applying the concept of sustainable development to the mining industry is fraught with challenges. Firstly, there is the existence of a fundamental incompatibility between the fact that the mined resources are non-renewable in nature, and the inherent meaning of "sustainability" as the maintenance of a constant level of consumption of these resources across the generations. Secondly, in reality it is a known fact that mines do negatively impact the socio-economic wellbeing of the nearby communities thus contradicting the notion of sustainability as properly meeting the needs of both the current and future generations (Waye et al, 2009: 152).

The crux of the argument advanced in favour of mining in the developing countries is that this industry has the potential to contribute significantly to economic growth and can generate great revenues for the host country. This argument places its emphasis on the role of economic growth, as advanced by the mainstream economists who call it essential for poverty reduction. According to this logic, if an economy is not expanding, it is not generating the resources and opportunities that are necessary to lift people out of poverty. In the words of Slack (2009: 76)

"Mining proponents usually concede that the industry itself does not generate significant levels of employment (particularly if one were to compare jobs created per dollar invested.) Modern mining is highly capital-intensive, relying on high technology equipment and relatively little labour. Of the labour that it does need, much of it is skilled and thus usually not accessible to unskilled members of local communities who live in the remote areas that are commonly where large-scale mining operations in developing countries are located."

The important thing about mining is that there are at least two types of views regarding the consequences of mining on economic development. For the sake of convenience we can classify them as conventional and non-conventional views respectively. While the former sees a positive relationship between the two, the later highlights the sharp contradictions associated with the conventional understanding of mining begetting economic wellbeing and overall economic development in a region.

In the words of Davis and Tilton (2005: 234),

"The positive relationship between mining and economic development advanced by the conventional view rests on neo-classical economics and in particular the concept of the production function. The latter reflects the technical relationships that govern how much output a country can produce from any given amounts of labour, capital, energy, materials, and other inputs. Everything else being equal, the more capital a country has, the greater its output and the greater its per capita income. According to the conventional view, mineral wealth in the form of deposits that can be profitably mined is part of a country's stock of capital."

Generally, it is said and established that the capital a country possesses is directly and positively linked to its output and the hence the per capita income of the country. However this doesn't inevitably apply to the case of the natural capital in the form of mineral deposits possessed by a country. The reason being such capital remains unproductive till the time it remains unextracted or dormant. For the potential of such capital to be realized, mineral deposits need to be extracted. So, according to the traditional/conventional view, mining plays an important role in the development process by converting mineral resources into a form of capital that contributes to a nation's output (Davis and Tilton 2005: 234).

The conventional view however, recognizes that under special circumstances a country may find it profitable to postpone the development of its mineral wealth immediately if the value of its mineral wealth in the ground is appreciating faster than other assets with similar risks. However this kind of practice is not very prevalent. Indeed, countries that deliberately delay the mining of currently profitable deposits in the hope that these deposits will be even more valuable in the future run the risk that new technology or other developments may make them completely uneconomic. In the words of Davis and Tilton (2005: 235):

"So normally, it is assumed, a country is better off mining its economic mineral resources now... The output associated with extracting mineral resources can be consumed or invested in other forms of capital. Consumption tends to raise current welfare, while investment leaves current welfare unchanged but raises future welfare by leading to economic growth. This assumes, of course, that the funds are

invested wisely. If they are invested poorly, mining may provide little or no future benefit to the country. In such cases, however, the problem is not mining, according to the traditional view. Mining provides the country with an opportunity. If the country fails to take advantage of this opportunity, the fault lies with the government and the other entities that decide how the newly converted mineral wealth is used. Moreover, at times the welfare of society may require that governments use their available mineral wealth for purposes other than economic development".

Doubts about the conventional view of mining started to arise since the 1980s, mostly because of a growing number of studies of individual mineral exporting countries that showed little or no economic growth over extended periods. For some of these countries, growth was even negative, causing early regional dominance to be lost over time (Davis and Tilton, 2002:8). This research clearly demonstrated that the exploitation of mineral wealth was far from a sufficient condition for sustained economic development (Sachs and Warner, 2001). This argument was earlier advanced by the likes of Richard Auty who propounded the famous "Resource-curse thesis" taking the non-conventional views on mining and development to a new high (Auty, 1993). Auty in his thesis argued contrary to the conventional view on mining and development that countries and regions with an abundance of natural resources, specifically non-renewable resources like minerals and fuels, tend to have less economic growth and worse development outcomes than countries with fewer natural resources.

Though there have been many counterclaims to this view of inverse relationship between mining of natural resources like minerals and development and the debate continues with both sides giving empirical evidences to support their claim, the fact cannot be denied that mining today stands as a controversial enterprise seen often as incompatible to the idea of long-term development (here development is being used in its broader socio-cultural and economic sense). The argument which carries weight is simple that even if like other industries and sectors, a cost-benefit analysis of mining is to be done, what is different about mining, however (and this is particularly evident in the developing world), is the scale and severity of the costs that the industry generates. The sheer magnitude of the disruption that mining can bring to a local community and its surrounding environment places it on a different scale than other kinds of economic development activity. Big industrial mining projects produce hundreds of millions of tons of waste material and have been known for

displacing thousands of people and causing permanent harms to land and water resources, rendering them permanently unfit for any other use. Costs for cleaning up mine sites can be very high, which can be a huge burden on cash-strapped developing country governments if they are left to cover these costs. In the words of Slack (2009:82), the governmental capacity to regulate these ill impacts of mining projects effectively in developing countries hardly ever exists which deteriorates the problems, and almost assures that the long-term costs of mining outweigh the benefits.

The Two Case studies of India and Brazil

The paper till now tried to untangle the major issues relating to mining under the two themes of 'the changing nature of mining' and the theme of mining and developmental debate' which tried to elucidate on the broad areas and issues emerging in the mining discourse. Now this section will try to fit the two case studies in this scheme of two themes, thus citing examples from the mining experiences of these two countries, namely India and Brazil. These two countries very rich in natural resources especially a varied range of mineral resources have seen mining since long back in history. At the very outset I would make it clear as to why this choice for the two countries when rampant mining has been on in many other countries of the world. My case for the same is very clear that these two countries share the status of being among the two most developing ones in terms of their GDP and industrialisation which keeps them at a higher pedestal than many of their not so lucky counterparts in the developing world. Whenever growth and advancement is talked about, these two countries figure out before economists and scholars as the success stories of the third world. However what led me to the choice of these two countries is not their sheer growth and development claims rather the often much less talked about but now an asserting phenomenon of the kind of destruction of livelihoods and underdevelopment witnessed in the interior corners of these two countries. In fact behind the shining urbanised and industrialised faces of these countries is a darker side common to both which has a common culprit in the form of high scale, rampant and unchecked mining.

India is the world's largest producer of mica blocks and mica splittings. With the recent spurt in the world demand for chromites, India has stepped up its production to reach the third rank among the chromite producers of the world. Besides, India ranks 3rd in the production of coal & lignite and barites, 4th in iron ore, 6th in bauxite and manganese ore, 10th in aluminum and 11th in crude steel in the World (Ministry of Mines, Government of India).

India's mining policy since independence was governed by the Mines and Minerals (Development and Regulation) Act, 1957 and Rules made under the Act by the Central Government and the State Governments in their respective domains. However it was revised with the bringing of National Mining Policy, 1993 as liberalisation made its way into India. This led to growth in the mining sector with the increasing role of many private players in the industry. And now the government is ready with its new National Mineral Policy, 2008 to further bring revisions in its approach in dealing with the mining sector. As the text of the proposed National Mineral Policy of the Ministry of Mines in India says "In future the core functions of the State in mining will be the facilitation and regulation of exploration and mining activities of investors and entrepreneurs, provision of infrastructure and tax collection" (National Mineral Policy, 2008).

Since mining in India is a very big sector, this paper will limit its analysis to eastern India basically focusing on the recent resurgence in the foreign companies in the sector and the mass dissatisfaction and resistance witnessed in the local populace. It will also provide a glimpse of the kind of concessions granted by the government at the cost of the local population, their natural livelihood. The tragedy that lies in the recent high-scale mining projects approved by the state is that they all fall in the poorest and starving blocks of the state. e.g. Niyamgiri hills in Lanjgarh block lies in Kalahandi, one of the poorest belts in India, similarly districts like Rayagada and Kshipur fall under the poverty-stricken zones and the policies of the state to acquire their land for the purpose of mining creates issues of violation of human rights but these have been compromised by making the indigenous people in these places pay the price for it.

The areas where mineral wealth is concentrated in East India are nearly all in mountain ranges that form the core of tribal areas. And at the core of the government's plan for development are projects meant to vastly expand mining throughout the region, multiplying the factories processing ores into metal, and building more hydro-dams and power stations to supply these factories with water and electricity. The aim of this new wave of rapid industrialisation is to enable India to pay off its debts and become a rich country. Masterminding this are companies and financial institutions that in many ways look like reincarnations of the East India Company, looting India's resources on a scale and at a speed that could never be done before. The dangers are mass displacement, social upheaval and an environmental catastrophe (Padel and Das, 2010).

Orissa has the highest percentage of India's total deposits of chromite, bauxite, graphite, manganese ore, and dolomite; fourth in total deposits of coal and fifth in the case of iron ore deposits. Within the last few years, as many as 56 memoranda of understanding (MoUs) have been signed with different companies just for the mining of natural resources. The present government has invited Hindalco (Aditya Birla group), Alcan (Canada), Vedanta (UK), BHP Billington (UK), Rio Tinto (UK), etc, with a proposed investment of nearly Rs 53,000 crore in order to extract a total deposit of 7,330 lakh tonnes of bauxite from the state. It has also contracted the extraction of 35,670 lakh tonnes of iron ore by TISCO, Vedanta/Sterlite, Bhushan Steel, Jindal, Essar, Mittal, BHP Billington, Rio Tinto and Posco, with an investment totalling Rs 1,30,000 crore, to extract and utilise the state's entire deposits of iron ore. In the case of manganese and coal too, there are large companies waiting to get in. These projects are estimated to displace nearly 2.5 lakh families, perhaps up to one million people. (Debaranjan, 2008) Even the government claims that if all these projects are implemented, only 50,000 jobs would be created. As per a government report, out of 56 MoUs, work has been started on 10 projects. Of these, it is known that Vedanta is facing criticism for violation of forest laws as per the Central Empowered Committee report, set up by the Supreme Court. UAIL in Kashipur has no environment, mining and forest clearances from the central government. (An Enquiry into Mining and Human Rights Violations in Kashipur, Orissa) But both are carrying on construction with virtual impunity. The Tatas in Kalinganagar did not have the environment clearances when land acquisition was done and during the course of which firing took place. Bhushan Steel does not have the required gramsabha resolution but is going in for construction illegally. Sterlite in Jharsuguda and Posco in Paradeep, Jagatsingpur district organised its mandatory public hearing in the presence of heavy armed police, which is illegal and inhibits opposition to the projects. These are completely in violation of the states own procedures and existing laws.

According to the Economic Survey of Orissa (2002-03), global mining giants such as Rio Tinto and Empire Gold Mines NL of Australia have entered into joint ventures and agreements with the Orissa Mining Corporation (OMC). As per the agreement with POSCO, the Orissa government has agreed to provide a mining lease to use 1,000 million tonnes of iron ore, of which 400 million tonnes will be exported to its Korean plants, over a 30-year period. In future, government would consider the extension of the agreement. POSCO's plan to export 400 million tonnes of iron ore to its Korean subsidiary reflects its vested interests in investing in Orissa and vindicates the implications of dependency theory (Das , 2005).

Thus, it quite evident that the Indian State in the recent times seems to have succumbed to the whims of the private sector and the foreign companies. There has also been widespread violation of the National Rehabilitation and Resettlement Policy, 2003 which was especially carved out to prevent the violation of the rights of the displaced indigenous people in these areas. In the context of the ploy of the mining companies, Felix Padel points towards how the aluminium companies constantly try to increase their production, which means increasing people's consumption of aluminium in a wide variety of applications. In India particularly, they are now trying to increase consumption from less than one kilo per person per year (the average till recently) to something approaching the 15-30 kg per year that is the norm in the 'developed world' (Padel and Das, 2010).

In Brazil, the scene is no better than in India. In fact as far as the diversity of minerals and resources is concerned, Brazil and India are quite comparable. Brazil produces 70 mineral commodities: 21 metals, 45 industrial minerals and four fuels. The South American giant is the second largest producer of iron ore worldwide, with 19% of total global output. After oil, iron ore is the second largest Brazilian export commodity. The Brazilian mining market is dominated by approximately 15 mining companies of both international and domestic origin. Iron ore is by far the most prevalent mineral exported to the international market from Brazil. Vale's pre-eminence in the Brazilian mining sector is expressed by the company's dominance over the iron ore market; representing 80% of total Brazilian production, with CSN, Anglo American, MMX and Samarco making up the shortfall (Global Business Reports: Brazil Mining, 2011).

Like India, a major issue of contention has been mining and the rights of indigenous people in Brazil. Brazil has around 895000 sq km of aboriginal land where lies the huge wealth of natural resources. Estimates from ISA, a major Brazilian NGO-covering the 1986-1998 period suggest a substantial increase in the number of exploration permits and mine concessions on aboriginal land. According to ISA, by the end of 1998, about 44% of the indigenous areas officially recognised by the government were susceptible to at least one mineral right, usually exploration claims. This situation is critical in the Amazon region where 60% of the aboriginal population is located (Socioenvironmental Institute).

In Brazil, the inclusion of indigenous rights in the 1988 Constitution resulted in neither political inclusion of indigenous groups, nor in improved access for indigenous people to the policy process. Rather, what can be observed is that, especially in regard to the demarcation of indigenous lands, Brazilian policy has failed to reach the standards set in the 1988 Constitution. Instead, there has been a conflict of interests between mining companies, the state that run contrary to those of

indigenous peoples, and a backlash against gains made in the Constitution. The process of indigenous policy formation in Brazil remains, in practice, similar to what it was like during less democratic times (Rodrigues, 2002).

Thus the case studies of India and Brazil tried to elucidate how mining involves interlinkages between state, mining corporations affecting the rights and livelihoods of the local people who bear the brunt of this enterprise. The paper at the very outset tried to do the same by presenting the various debates and stakeholders in mining which were brought into light through these two studies. This paper moreover tried to capture the contemporary rush among states to attract more FDIs through big MNCs but at the same time they hardly care for the local environment and livelihood issues. Though both the countries have statutory and constitutional provisions to protect the indigenous population, to deal with their displacement and rehabilitation issues, in reality they have hardly seen the light of the day. The recent international norms of conducting impact assessments are also manipulated in the favour of the mining companies. Despite all these, the recent years have seen the rise in social movements in both these countries against the mandate of the state imposed on them. And it has given the mining discourse a new way where unlike the earlier times, exploitation and dispossession is no longer being tolerated in silence. However the question of development and its compatibility with mining remains. This needs to look into the issue by at least slowing the pace at which countries are moving in the mad rush for growth by FDI in mining sector because at this speed development itself remains a distant dream, let alone sustainable development.

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