



Mining in Odisha –A Pathway for Economic Development

KEYWORDS

Mineral, Environmental Pollution, Economic Development.

Minati Sahoo

Lecturer in Economics, Ravenshaw University, Cuttack, Odisha

ABSTRACT Mining resources in any economy plays a pivotal role in its development by helping in the growth of industrial sector as they constitute an important source of raw materials for most of the basic industries necessitating their exploration from earth. They represent the wealth of a region where they exist. It generates employment opportunities to the people, income to state exchequer and foreign exchange to the mineral producing country. Odisha is a very rich mineral bearing state of India. But the extraction and processing of ores and minerals lead to widespread environmental pollution. Can Mining serve as a pathway for economic development despite the environmental externalities? Thus an attempt has been made in the present study to assess the contribution of mining sector to the development of Odisha and percolation of this development led benefit to the inhabitants of mining region in terms of employment opportunities.

INTRODUCTION

Minerals constitute an important source of raw materials for most of the basic industries necessitating their exploration from earth. They represent the wealth of a region where they exist and open up wide vistas for the prosperity of the region. Odisha is a very rich mineral bearing state of India. Odisha is the leading producer of chromites, graphite, bauxite, manganese ore, iron ore, sillimanite, quartzite, pyroxenite and dolomite.

The mining and quarrying sector has been contributing about 7 percent towards Odisha real GSDP at 2004-05 prices (Economic survey of Odisha, 2011-12). This is also a source of revenue to the state exchequer in terms of royalty collected from the lease holders. State government earns Rs 1029 million in 2010-11 as royalty collection in minerals (Indian Bureau of mines). In terms of value of output of minerals, Odisha ranks highest enjoying 11.89 percentage share of total value of mineral output in India in 2010-11 (Economic Survey of Odisha, 2011-12). Within the State, coal constitutes the lion's share (87%) of all mineral deposits, followed by iron ore and bauxite, about 47 percent of coal has been extracted in Angul district and the rest from Jharsuguda, Sundargarh and Sambalpur districts. Iron ore extraction is mostly confined to Keonjhar district which accounts for 63.8 percent of total extraction, followed by Sundargarh (34.3%). Most bauxite mining takes place in Koraput district. Iron ore is the most important mineral in the export basket of all minerals. Its share in total exports of minerals stood at 97.3 percent in 2010-11. The sector has been increasingly employing labor saving and capital-intensive production techniques and technology over the years. The employment has touched 51,877 by the end of 2010-11 showing an increase of 18.7% over 2009-10. Further, nearly 70 percent of them are engaged in the iron ore and coal sub-sectors.

Mineral resources development is an essential condition for successful economic development of an economy (Bogdetsky V, Ibraev K, Abdyrakhmanova J, 2005; Ofosu-Mensah E.A, 2011). It generates employment opportunities to the people, income to state exchequer and foreign exchange to the mineral producing country (Akabzaa T and Darimani A, 2001; Bogdetsky V, Ibraev K, Abdyrakhmanova J, 2005; Ofosu-Mensah E.A, 2011). Thus mining contributes significantly to the development of the mining region and the entire nation (Ofosu-Mensah E.A, 2011). So mineral rich backward region of the world should invest more in mining activities in order to break the chains of poverty as mining industries can generate wealth, create large scale employment, develop infrastructure, provide raw materials for most industries, contribute to production and trade and promote economic growth. A number of studies are

there which substantiate the argument that mining is an important economic activity and provide a major structure upon which development of any economy gifted with rich natural resources rests (Ejdemoand Soderholm, 2011; Ye, 2008; Brunnschweiler, 2006; mcmohan and remy, 2001; Stilwell et al, 2000; clements et al., 1996). The co-occurrence of poor economic performance and natural resource abundance is an empirical regularity. The extensive literature (Yuxian and chen, 2011; Torvik, 2009) on this 'resource curse' phenomenon at the national level generally finds that economic dependence on point resources such as minerals is associated with lower levels of economic growth and human welfare. Various explanations have been offered for this association, many related to trade, rent-seeking, and national political institutions. Thus the relationship between mineral resources exploitation and national economic development is not very clear. Can mining serve as a pathway for economic development despite the environmental externalities? Hence an attempt has been made to study the following objectives:

1. What is the contribution of mining sector to the development of the Odisha economy?
2. Whether the people living in mining region are benefited from development generated due to mining in terms of employment?

MINING AND STATE DEVELOPMENT

Odisha is one of the richest mineral resource abundant economies in the country. Its richness is depicted below in table 1.

Table 1: Minerals in Odisha

Mineral ore	Reserves in Odisha (%)	Percentage to all-India reserves
Coal	86.67	25.82
Iron ore	7.04	32.53
Bauxite	2.39	56.36
Chromite	0.24	98.39
Dolomite	0.44	12
Limestone	1.34	1.31
Manganese Ore	0.16	28.57
Fireclay	0.23	25.07
Graphite	0.01	28.7

Source: Directorate of Geology, Government of Odisha, Bhubaneswar

Mining sector has contributed significantly to Odisha's NSDP. In recent years mining and quarrying sector has contributed 8.83% to the state's overall NSDP as evident from table 2. Odisha's annual average growth rate of NSDP has increased from 10.59% in 2000-05 to 16.37% in 2005-2011. Though the average growth rate of the contribution of mining and quar-

rying sector to NSDP has decreased from 25.95% in 2000-04 to 22.8% in 2005-11 but its share to total NSDP has increased from 5.42% to 8.83% in the same period. During entire decade from 2000-11, mining and quarrying sector has contributed on an average of 7.41 % to state's net domestic product with an increasing trend. This shows that the economy of Odisha has been expanding with a vibrantly booming mining and quarrying sector.

The production and value of minerals in the state has increased at an annual average rate of 11.37% and 26.56% during the decade 2000-10. while the average annual growth rate of production has been halved during 2005-10 as compared to previous period of 2000-04 but average annual growth rate of value has increased during the same period. Not only extraction or production, the exports and value of minerals and ores from the State have been increasing from 36.6 lakh ton in 2000-01 to 247.6lakh ton in 2010-11, although not steadily. Iron ore is the most important mineral in the export basket of all minerals. Its share in total exports of minerals stood at 97.3 percent in 2010-11.

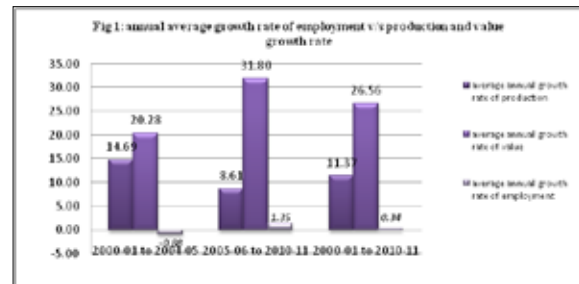
Over the last decade the total revenue receipts of Odisha has increased substantially. Mining royalty has formed an important source of the total revenue. The annual average rate of mining revenue was 16.13% during 2000-2005 and mounted to 25.12% during 2006-2010 indicating that during the recent years the annual average rate of growth in mining revenue has been large. Not only the total revenue receipts but also the total own non-tax revenue of the state has increased vastly between 2000 and 2009. It is noticeable that the average growth rate of total own non-tax revenue was 8.68% during 2000 to 2004 and increased by more than three times and reached 26.35% during the period 2005 to 2009. This clearly testifies that expanding mining sector in terms of revenue collection from minerals has resulted in perpetuating total revenue receipts and total own non-tax revenue in Odisha entitling the state government with a sustained financial inflow.

A robust performance of the mining sector has been accompanied by effectuation of large mining-based industries in Odisha. The state's comparative advantage of rich mineral resources has attracted many mining and metallurgical companies. Many power plants have come up in the state especially after nationalization of coal in 1975 and national policy on energy sectors. The growing industries in the state are expected to have fostered more employment opportunities in mining and industries sector, thereby raising the economic well-being of the people.

MINING AND EMPLOYMENT:

The level of employment in mining sector during the decade shows a dismal state of affairs as shown in figure. The average growth rate in employment during 2000-01 to 2004-05 has been negative. Ironically this decline in employment has happened when average growth rate in production and value have been positive during the same period. Employment turned positive with average growth rate of 1.35% dur-

ing 2005-06 to 2010-11. Overall during the decade though average growth rate in production and value has increase by 11.37% and 26.56 % but people has not been that much benefited in terms of employment as average growth rate in employment has been mere 0.34% during whole decade which is seen in figure 1.



In spite of economic and other benefits that accrue due to mining there is almost a unanimous agreement that this activity is beset with a number of problems. The impacts of mining are felt at every stage of the mining cycle from exploration to mine disclosure. It is one such activity that has highly adverse consequences not only on natural ecosystem but also on the local communities dependent on them (Vaghlikar N et al, 2003). The villages closest to mines appear to bear a greater environmental cost (Pattanayak S K et al, 2010). The adverse impact of mine on environment can be seen in form of pollution of air, water, land and noise. Further a study by Noronha and Nairy (2005) shows that though mining region has a lower Quality Of Life relative to the non-mining villages but people in the mining region reported lower satisfaction levels only in the environmental domain. The mining effect on health of residents in the communities is related to distance from the mines. That is, proximity to mine site is very crucial in determining the prevalence of mining related diseases such as malaria, respiratory infections and skin diseases (Yeboah J Y, 2008).

CONCLUSION

Mining resources extraction in any economy plays a pivotal role in its development. The present study finds that a forceful performance of mining sector (in terms of production, export and value) and a widespread of mining activities in the state has substantially contributed to government exchequer in form of royalty, taxes. But seeing employment trend it can be inferred that people in mining region has not been benefited very much. The negative impact of mining on health, land, water, air, plants and animals can be reduced by careful planning and implementation of mining activities. In order to ensure that the mining industry in Odisha becomes a sustainable engine of broad-based and equitable growth it is necessary that people in this region should be able to reap benefit from mining. Thus we could safely conclude that mining can be the driver of economic development of the region provided health aspect of inhabitants of mining region are duly taken care of and it should be more employment generating in nature.

REFERENCE

- Akabzaa T. and Darimani A. (2001), "Impact of mining sector investment in Ghana: A study of the Tarkwa mining region", (A Draft Report) Prepared for South Asia Policy and Research Institute (SAPRI) | Bjorvatn, K. and Selvik, K. (2007). "Destructive competition: Factionalism and rent-seeking in Iran". Norwegian School of Economics and Business Administration Discussion Paper. | Bogdetsky V., Ibraev K., Abdyrakhmanova J. (2005), "Mining Industry As A Source Of Economic Growth In Kyrgyzstan" the Project Implementation Unit of the World Bank, (IDF Grant No. TF053432). | Brunnschweiler, C.N. (2006). "Cursing the blessings? Natural resource abundance, institutions, and economic growth". Center for economic Research Working Paper, 51, Zurich. | Clements, L.W. et al., (1996). "New mining and mineral-processing projects in Western Australia: Effects on employment and the macro-economy". *Resources Policy*, 72, Vol-4 (2008), 293-346. | Ejdemo, T. & Soderholm, P. (2011). "Mining investment and regional development: A scenario-based assessment for Northern Sweden". *Resources Policy*, 36 (2011), 14-21. | McMohan, G. & Remy, F. (2001). "Large Mines and the Community—Socioeconomic and Environmental Effects in Latin America, Canada and Spain". World Bank and International Development Research Centre, Washington, DC and Ottawa. | Mensah E. A. O. (2011), "Gold mining and the socio-economic development of Mining Industry" report commissioned by the MMSD project of IIED | Noronha L. and Nairy S. (2005), "Assessing Quality of Life in a Mining Region", *Economic and Political Weekly*, Vol. 40, No. 1, pp. 72-78 | Pattanayak S.K., Saha S., Sahu P., Sills E.O., Singha A. and Yang J.C. (2010), "Mine over matter: Health, wealth and forests in a mining area of Orissa". *Indian Growth and Development Review*. 3(2): 166-185. | Stilwell, L.C. et al., (2000). "An input-output analysis of the impact of mining on the South African economy". *Resources Policy*, 26 (2000), 17-30. | Torvik, R. (2002). "Natural resources, rent seeking and welfare". *Journal of Development Economics*, 67 (2002), 455-470. | Vagholikar N. et al (2003), "undermining India: impacts of mining on ecologically sensitive areas", Published by Kalpavriksh | Ye, Q. (2008). "Commodity booms and their impacts on the Western Australian economy: The iron ore case." *Resources Policy*, 33 (2008), 83-101. | Yeboah J. Y. (2008), "Environmental And Health Impact Of Mining On Surrounding Communities: A Case Study Of AngloGold Ashanti In Obuasi", Thesis submitted to the Department of Geography and Rural Development, Kwame Nkrumah University of Science and Technology, Ghana. | Yuxian, K. and Chen, Z. (2011). "Resource abundance and financial development: Evidence from China". *Resources Policy*, 36 (2011), 72-79. |