

VALUE CHAINS IN S A 'S MINING INDUSTRY

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A brief excursion into South Africa's mining industry brings out the critical problems of mining across Africa. Citibank reported in 2010 that South Africa is the best mineral resourced country in the world (excluding oil) so it is important to examine what benefits this natural wealth has brought. The potential is huge since it has 88% of the world's platinum group of metals, manganese 80%, chrome 72%, vanadium 32%, gold 30%, and substantial deposits of other critical minerals.

Rich deposits of diamonds and gold were discovered in the late 19th century. Both led to substantial excavation and extraction of ores by means of British capital, skilled labour and hundreds of thousands of cheap migrant African labour. In the Witwatersrand it also led to the rapid growth of supporting engineering enterprises and commercial and financial businesses to service the large number of people involved.

Subsequently other minerals were discovered in remoter areas, these yielding substantial wealth, but they remained economic enclaves without the expected associated enterprises and businesses or urban development.

This has led to speculation about the anomaly of the coexistence of a large mining industry with little downstream beneficiation or fabrication. Nevertheless the mining industry contributed 7% to GDP and the Chamber of Mines claimed that it contributed 10% indirectly to GDP as well as 500,000 indirect jobs and large benefits to secondary industry, commercial and financial business. There are also substantial lateral linkages to goods and services required by mining, as well as some downstream business opportunities and sales of minerals into the domestic market.

These claims of indirect benefits has not satisfied critics who argue that much more needs to be done by way of multipliers into the rest of the economy on the back of these vast natural resources, which are state owned, the heritage of all South Africans, and are operated by the mining companies under licence. Presently the mining companies engage in exploration, extraction, processing and refining (or first stage beneficiation). The subsequent stages of beneficiation, semi-fabrication and final fabrication into a finished products is left to manufacturing industry.

The Chamber of Mines, which represents most of the large mining companies has declared that it fully supports the promotion of "greater manufacturing beneficiation" outside of the mining industry since it is highly specialised and not competent to do manufacturing related activity. They claim that "the key drivers of manufacturing beneficiation are not related to the comparative advantages inherent in resource endowment, but by competitive advantages." They hold that "Comparative advantage tends to be inherited by countries (e.g. minerals or natural beauty) while competitive advantage is created by firms.

This separation of the roles of mining from manufacturing leads to the suggestion that mining contributes to the economy by way of foreign exchange, taxes and employment, while manufacturing in the mineral value chain should stand alone, possibly with state subsidies. Crucially, they object to any obligation on the mining companies to supply processed minerals to manufacturing at anything less than international price levels. However the result of this policy is that South African manufacturers operating in the minerals value chain have to pay import parity prices for steel, for example, which prices them out of competition. Furthermore, since countries like China are able to produce manufactured products more cheaply than South Africa manufacturers, the latter are seriously undermined.

We are therefore faced with a curious anomaly. A country with huge natural resources, will export these resources in raw form, to be beneficiated and fabricated elsewhere, and the final product is imported back into the original country with most of the value added abroad. Worse, because the manufacturing capability has been undermined, even the inputs into mining, such as machinery, is also imported, thus large segments of the value added takes place abroad. This means that much of the developmental linkages and broader capabilities, including research and training, so necessary for all round development of a country and its people is stalled. The result is de-industrialisation.

Several conclusions may be derived from this analysis.

1. There can be no iron wall between mining and manufacturing, the promotion of an interface must be beneficial for the national interest. Cooperation could include pricing arrangements, limited protectionist arrangements applied by government, cooperation in skills development, positive procurement measures to favour domestic industry, and clear taxation policies to encourage localisation. If the mining companies insist on remaining within their "core competencies" this opens up spaces for others to take over those functions which were previously vertically integrated in their operations.
2. Even where a country does not have the capability to operate across a whole value chain with respect to any mineral, a thorough analysis of each stage of the value chain will show that a useful intervention may be possible at any specific stage in the whole process from extraction to fabrication. It is then possible to rapidly develop the necessary technical capability for intervention in infant industries for instance, as well as establish the necessary linkages.
3. A fully integrated economic beneficiation strategy requires as much attention to the industries and services associated with inputs into the mining sector as it has to do with post-mining processes and industrial use.
4. Although it is not absolutely necessary for there to be close proximity of the raw material to the final manufacturing enterprise, and indeed, many final products are produced in countries with no natural resources, where there is such proximity, government intervention, such as reduced transportation costs, local procurement, incentives etc, could turn proximity into an advantage.

5. Experience also indicates that providing favourable tax and other incentives to foreign firms to operate in the domestic mining industry in the expectation of short term gains, can serve to disadvantage local enterprise development. Furthermore, the tendency to seek economic rents beyond reasonable returns generally leads to excessive exploitation of the workforce coupled with hazardous social consequences as the Marikana disaster showed.
6. Since markets in mining are generally imperfect due to monopolies, a developing country cannot depend on market forces to optimise the benefits of the mineral resource in the national interest. Each country has to lay out the required infrastructure such as energy, roads, water, rails, ports etc.
7. The key to maximising benefits in the national interest lies in the conditions attached to mining licences, including a proportion allocated to historically disadvantaged companies and communities. These should specify all the requirements necessary, including quantities allowed for export, prices for domestic users, environmental concerns, and all socioeconomic aspects. Above all, there must be a full acceptance that minerals are a depleting resource so industrial capabilities must be built in to ensure a sustainable future for the country's economy.
8. The argument that minerals and mining are a function of a country's comparative advantage can only lead to the conclusion that this is an excellent base to pursue its competitive advantage as well. The linkage is built in.
9. In order to enhance capabilities and sustainability everything possible should be done to create economies of scale, be it in the input or output side, which may mean cooperation between companies and even countries.
10. Beneficiation requires a great deal of business skill and industrial practitioners, it cannot be done by public servants acting in that capacity.