

Policy Brief – Examining Beneficiation

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Note: This is a non-technical policy brief based on "Examining Beneficiation" by Ricardo Hausmann, Bailey Klinger, and Robert Lawrence, available at <http://www.cid.harvard.edu/cidwp/162.html>.

This paper is part of the CID South Africa Growth Initiative. This project is an initiative of the National Treasury of the Republic of South Africa within the government's Accelerated and Shared Growth Initiative (ASGI-SA), which seeks to consolidate the gains of post-transition economic stability and accelerate growth in order to create employment and improve the livelihoods of all South Africans. For more information and the entire series of papers, visit the project's web site at <http://www.cid.harvard.edu/southafrica>.



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Beneficiation is a pervasive policy paradigm in South Africa. This is partly because it seems to be a logical and natural progression for countries like South Africa to develop by moving from exporting raw natural resources, particularly minerals, to capturing more of the value added and engaging in greater downstream processing. It is also partly because, on the African continent as a whole, the exporting of raw natural resources is a legacy of colonialism, in which countries were precluded from developing their own processing capacities in order to supply the motherland with cheap raw materials. It seems quite sensible, therefore, that policies are needed to take advantage of the opportunities presented by rich mineral endowments and to overcome this colonial legacy.

However, both theory and practice provide reasons to question the presumption that downstream processing is an appropriate development path. The skills and other inputs required to process raw materials and market finished products could be very different from those required to mine or grow them. The key input for producing Aluminium, for example, is cheap energy, not local Bauxite deposits, and that is why South Africa could develop Aluminium exports, even though it had no Bauxite and why Jamaica produces Bauxite but does not process it.

To be sure, there are cases –most famously England’s midland during the industrial revolution -- when coal and iron ore endowments favored a local steel industry, but there are other examples, most obviously Japan, where industrial prowess was attained despite poor natural resources. Moreover, there are strong reasons to believe that whatever was true in the past, as transportation costs have declined, and global markets have become more integrated, the advantage of proximity to raw materials production has diminished.

The enclosed study confirms these ideas. It provides comprehensive evidence, using a large international data sample from the past 25 years, that countries do not move downstream in their export development. This is as true for rich countries as for poor countries, and even more true for downstream movements from raw materials than for other manufactured goods. The generalization that countries should beneficiate as a development strategy is rejected by the data and it suggests that rather than presuming that beneficiation provides an appropriate development path, those advocating such an approach in any given situation, need to provide a case by case justification of their reasoning. Without such justification beneficiation could prove extremely costly. The government does not have limitless capacities and resources, so any focus on one set of activities necessarily comes at the expense of others. Concentrating on beneficiation may also lead policymakers to overlook more attractive “lateral” development opportunities. Capabilities developed in mining may lead more naturally to other types of engineering for example, than to downstream minerals processing. For these reasons, we would argue that beneficiation is a bad policy paradigm and should be dropped from South Africa’s development strategy.