

Industrial policy: Key to unlocking beneficiation potential?



In one of my previous articles, I floated the idea that critical minerals can be key levers to industrial development, leading to substantive technological and economic catch-up. Although the role of mineral endowment in the technological and economic catch-up framework is vague and still poorly understood, there is no doubt that value addition and localisation of manufacturing value chains can have a long term impact on the economic well-being of resource-rich countries. The emphasis on industrial development means that the concept of technological and economic catch-up should not be viewed narrowly within the context of clean energy or just energy transition, but rather, from a broader industrialisation and technology upgrading point of view. The nexus between value-added manufacturing capabilities and industrial development has precipitated urgent calls for resource-rich countries to increase the level of beneficiation of mineral resources in host communities.

The view that Africa should focus on exporting processed products rather than raw commodities were echoed in various discussion forums at the recently concluded Mining Indaba 2025 held in Cape Town. The theme of this year's indaba had an interesting vibe to it, with key discussions focusing on the requisite actions to secure the future of African mining, with specific emphasis on increasing investment confidence, policy stability, and on building collaborative partnerships that can lead to shared and tangible economic value. Judging by the intensity of messaging, there is obvious convergence among politicians, academia, and industry on the need to increase the levels of value addition and beneficiation in host communities. Public announcements by key industry and public figures also highlighted the need to promulgate policies that incentivises local beneficiation, with specific emphasis on fostering innovation and sustainability in the minerals industry. Despite the strong convergence on the need to maximise the value addition and beneficiation of mineral products, both industry and the public seem to hold diverging views on the implementation framework and way forward. For example, the focus by industry on the need for more incentives, tax breaks, infrastructure availability (such as electricity, rail, and port), and quality of skills, may be dichotomous to government priorities of focusing on industrialisation, socio-economic development, and employment creation for historically disadvantaged members of society. These diverging views and priorities naturally create challenges to the implementation of a holistic value addition and beneficiation strategy unless protracted effort is directed at developing and implementing an industrial policy and implementation strategy that caters for the needs of all the stakeholders in the industry.

Industrial policy can be defined in many ways. In principle, industrial policy refers to a deliberate government strategy to actively support and shape specific industries in economic sectors deemed crucial for competitiveness in the global arena. Depending on economic capacity and need, a government can use industrial policy tools and levers such as subsidies, tax breaks, trade protection, dedicated R&D funding, and preferential procurement, among others, to promote a sector-specific technological advancement and, ultimately, the overall industrial development and economic development. Using industrial policies and its levers to stimulate growth in a specific industry is not new and can be traced back to influential economists. One such example was Friedrich List (1789-1846), a German economist who, through his seminal nationalist theory of political economy, advocated for the need to use tariffs as a tool to protect fledgling industries. Recent examples of targeted industrial policies levers include China's Made in China 2025 strategy, the United States' CHIPS and Science Act 2022, Japan's Monozukuri economic blueprint,

President's Corner *(continued)*

and Germany's Industrie 4.0, among others. For the African continent, the African Minerals Development Strategy promulgated by the African Union is a bold and ambitious strategy that has significant potential to promote the sustainable extraction, production, beneficiation, and commercialisation of Africa's mineral resources.

While industrial policies and other statutory instruments can act as effective tools and levers to increase the local content of value-added manufacturing and services in the mining sector, their effectiveness is strongly dependent on a myriad of economic, social, technological, and political factors. If value-addition and beneficiation is a mission, then the industry needs mission-oriented industrial policies to drive innovation and technological upgrading in that specific industry. Instead of protectionism and tariffs as tools and policy levers, a clear strategic framework supported by bold strategies and incentive levers to encourage new players to integrate into the downstream beneficiation of mineral products is required. Similar to China's deliberate support of new and strategic industries through the Made in China 2025 strategy, tangible results and impact can be achieved by supporting and incubating agile SMEs and SMMEs to drive the downstream industries. By supporting the so-called "little giants" in strategic industries (see details here https://thediplomat.com/2024/08/china-is-betting-big-on-its-little-giants/), the Chinese government deliberately considers smaller firms as valuable sources of innovation and basic force for improving the competitiveness of the value addition and beneficiation supply chain. Through strategic support, the state plays dual entrepreneurial and accelerator roles (an interesting analysis is available here: https://merics.org/en/report/accelerator-state-how-china-fosters-little-giant-companies), akin to building and supporting an Olympic sports team.

In conclusion, the dissonance arising from the current export of raw and unbeneficiated mineral commodities is understandable. However, there is a need for practical steps to increase the levels of value addition and beneficiation in host communities. A clear strategic framework supported by bold policies and incentive levers is required to integrate new entrants into the downstream beneficiation of mineral products. Akin to craftmanship, building a solid base of skills through high quality STEM graduates and industry PhDs is crucial to unlock the entrepreneurial potential of SMMEs and SMEs active in the downstream industries. R&D incentive levers and collaborations (local, regional, and international) are also required to unlock value from complex value chains.

In line with my quest for a deeper Socratic engagement, I am looking forward to further engagement on this complex subject.

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