

Industrialisation: Enhancing Beneficiation in SA

Mining Legotla 2014



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INTRODUCTION

- SA faces the challenge of diversifying from mining and resource extraction towards a manufacturing, value adding and job creating economy
- Recent GDP contraction is evidence of the importance of mining but serious need to move up the value chain. We need to position ourselves to create sustainable job opportunities in other sectors of the economy through mining's linkages
- The success of an economy depends on manufacturing and the multipliers leading to improved productivity and competitiveness, technology development and demand for skilled workers
- Our industrial policy is aimed at growing and strengthening the extent of manufacturing in SA of which **beneficiation** and **local procurement** is pivotal

RESOURCE-BASED INDUSTRIALISATION

- Importance of industrialisation as an engine of sustainable economic growth and development
- Success of industrialised nations attributed to clear industrial priorities and interventions to leverage comparative advantage in the desired direction
- Most of the new industrial powers were previously primary-based economies (China, South Korea, India, Brazil, Malaysia, Vietnam, Indonesia and Mexico)
- In SA and Africa the contribution of the industrialised sector is well below potential and there is a growing focus on leveraging the linked industrial opportunities afforded by the continent's mineral resources
- ***Key industrial opportunity arising from natural resource endowment is not the opportunity to exploit the resource but rather the development of the up and downstream industries (Ramos 1998, Walker & Jourdan 2002) – Nordic countries, New Zealand, Australia, Canada***



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BENEFICIATION

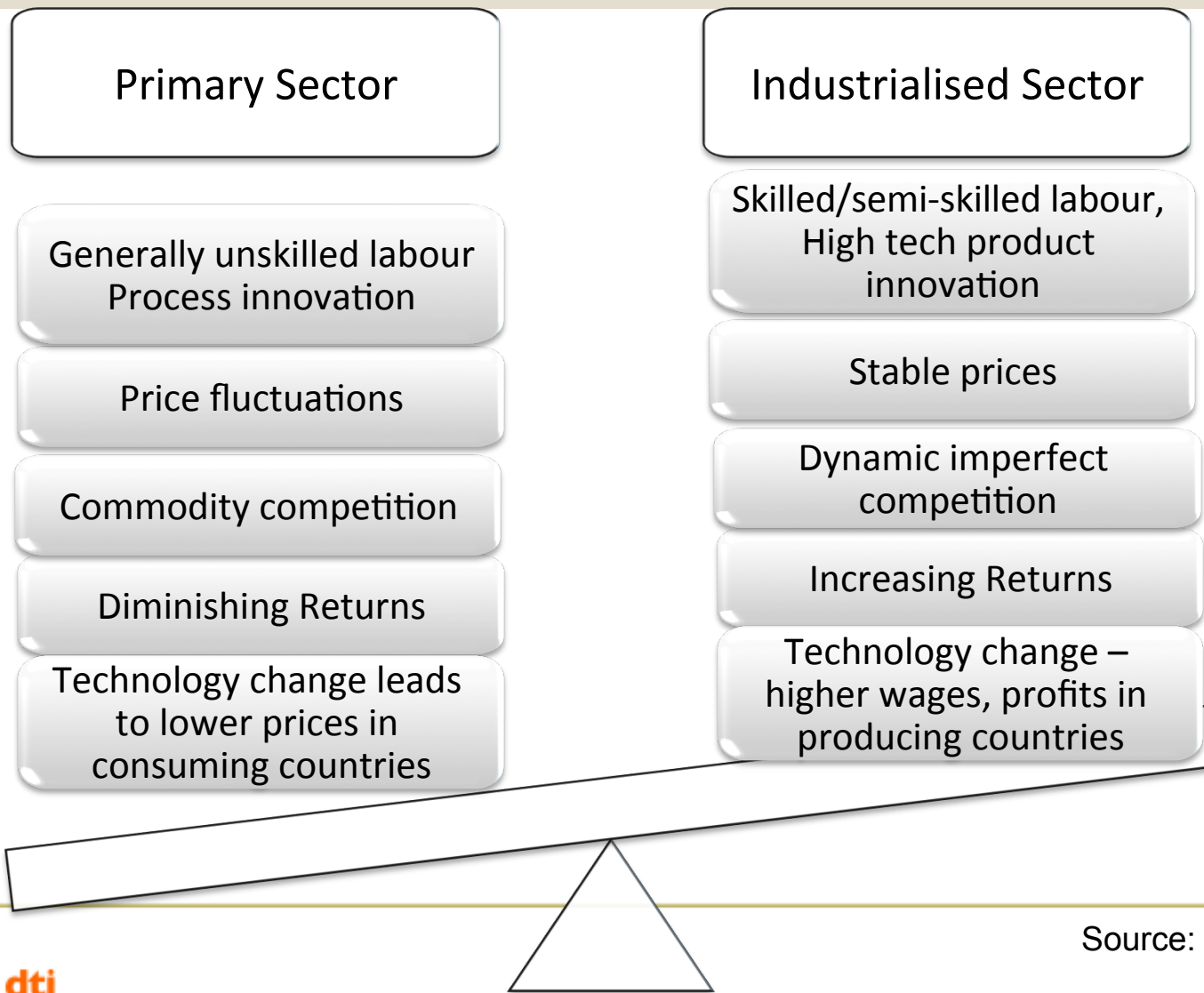
- Minerals beneficiation has been identified as a key pillar of SA's reindustrialisation push
- Further downstream and upstream beneficiation has not fully reached its economic potential
- SA's exports remain predominantly commodity-based, with low levels of value addition
- Contrast to other developing countries - growth in the productive sectors, highly differentiated markets
- Our resource endowment has to be translated into a competitive advantage for local beneficiation through focused and aligned policy measures



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PRIMARY VS INDUSTRIALISED SECTOR



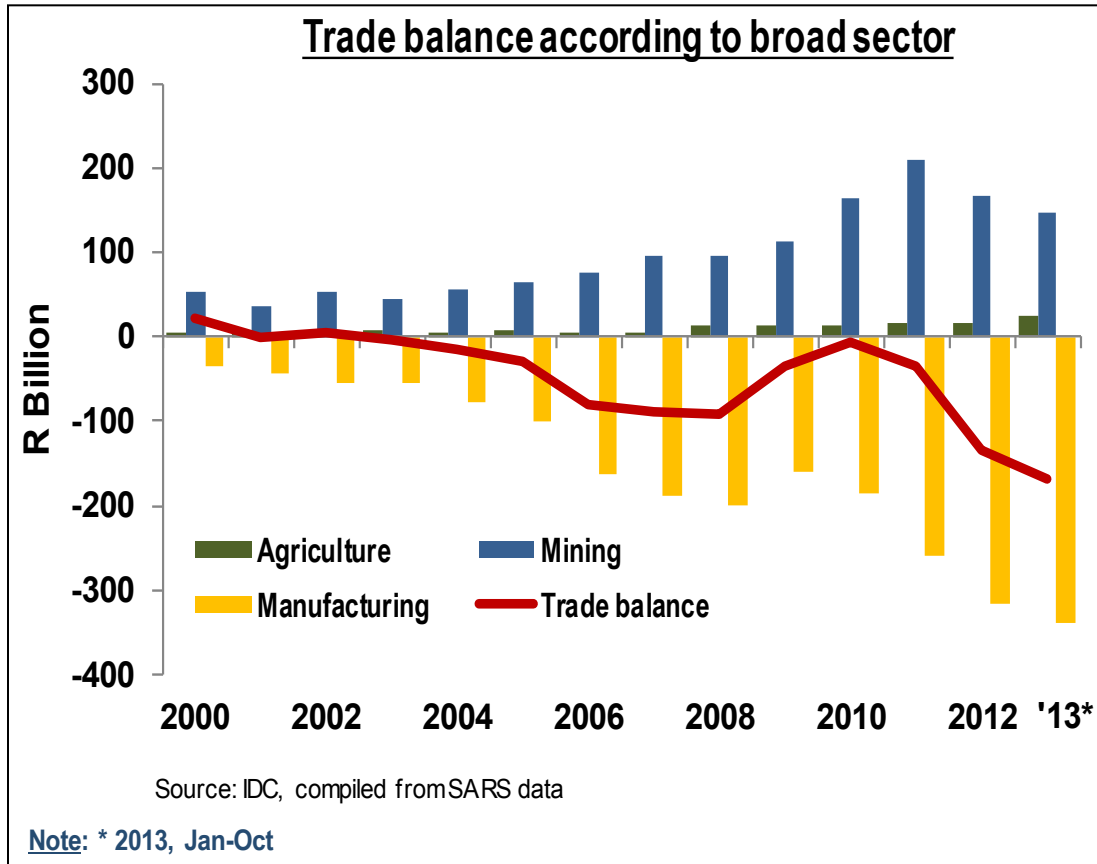
Source: E. Reinert, 2012



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TRADE BALANCE



Key challenges:

1. Monopolistic pricing of inputs
2. Infrastructure and logistics (cost of export of value-added goods is higher than cost for primary commodities – port and rail)
3. Capital and energy intensive industries
4. Weak export demand
5. Competitiveness constraints - rising global technology competition, skills shortages

The current situation is where SA exports most of its mineral outputs while significantly relying on imported inputs



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MINING – MANUFACTURING LINKAGES

The manufacturing sector generates the strongest multipliers across the economy, which are important mechanisms for growth and poverty reduction.

- **Forward Linkages/Downstream Benefication** are central to manufacturing and SA's export strategy, based on value-added, labour-intensive tradable mineral products (components, sub-assemblies and finished products)
- **Backward linkages/Upstream** are manufactured inputs into mining – capital equipment, consumables and services (engineering, financial, environmental)
- **Spatial linkages:** logistics and infrastructure are important for manufacturing competitiveness. Transport (rail, road, ports), power (generation & supply), water, local economic development
- **Knowledge Linkages:** manufacturing remains a key driver of innovation and knowledge development.

Source: Jourdan 2012

SA MINERAL LINKAGE OPPORTUNITIES

South Africa has a comparative advantage in developing and expanding mineral linkages:

- **Backward/Upstream**- the large market offered by the local and regional mineral industries demand for inputs such as plant, equipment, machinery, consumables and services – economies of scale
- **Knowledge** – having a potential technological advantage through close proximity to the mineral industries' demand for innovation, adaptation and problem solving
- **Forward/Downstream** - feedstock advantage and security of supply for downstream mineral processing and beneficiation industries, such as refining, alloying, fabrication
- **Lateral** - Opportunities to develop the supplier industries for the extensive resource infrastructure requirements in transport, power and water (construction materials, rail and capital equipment)
- **Spatial** – Transport and energy expansion, Special Economic Zones

The intention is to translate these comparative advantage opportunities into a competitive, skills based advantage



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SPECIAL ECONOMIC ZONES

the dti aims to establish a series of industrial bases across the country creating an environment for new strategic industrial capabilities with a strong focus on value addition

The SEZ Act provides for the designation of the following types of SEZs

- Free Ports: Duty free areas adjacent to a port of entry where imported goods may be unloaded for ***value-adding activities***
- Free Trade Zones: a duty free area offering storage and distribution facilities for ***value-adding activities*** within the SEZ
- Industrial Development Zone: leverages domestic and foreign fixed direct investment in ***value-added, export-oriented manufacturing industries*** & services

The following SEZ tax incentives are proposed:

- Corporate tax incentive for investors in SEZs
- Building Tax Allowance
- Accelerated 12i Tax Incentive
- Employment Tax Incentive
- Duty Free areas



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BENEFICIATION PROMOTION PROGRAMME

- Transnet National Ports Authority (TNPA) has decided to introduce a Beneficiation Promotion Programme (BPP) to incorporate government's industrial policy into the determination of cargo dues tariffs
- Pricing strategy proposes a reduction on export cargo dues of benefited cargo, with varying levels of discount according to the beneficiation stage of the exported goods.
- TNPA's pricing strategy on BPP tariffs would be based on **the dti** framework for stages of beneficiation
- Proposing similar programme to be assessed for rail



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SWOT ANALYSIS

Strengths

- SA holds the world's largest natural reserves of gold, platinum-group metals, chrome ore and manganese ore, and the second-largest reserves of zirconium, vanadium and titanium.
- High level of technical and production expertise and capability, research and development activities.
- World-scale primary processing facilities in gold and PGM's, steel, stainless steel and aluminium

Weaknesses

- Infrastructure – shortages of infrastructure (rail, water, ports) and electricity supply
- Skills shortages, decreasing R&D (effective use of technologies requires skills)
- Low levels of commercialisation of research findings
- Education system not producing enough learners with Maths and Science at matric level - pre-requisite for entering the engineering and science fields of study
- Access to industrial finance – export, venture capital finance is limited

Opportunities

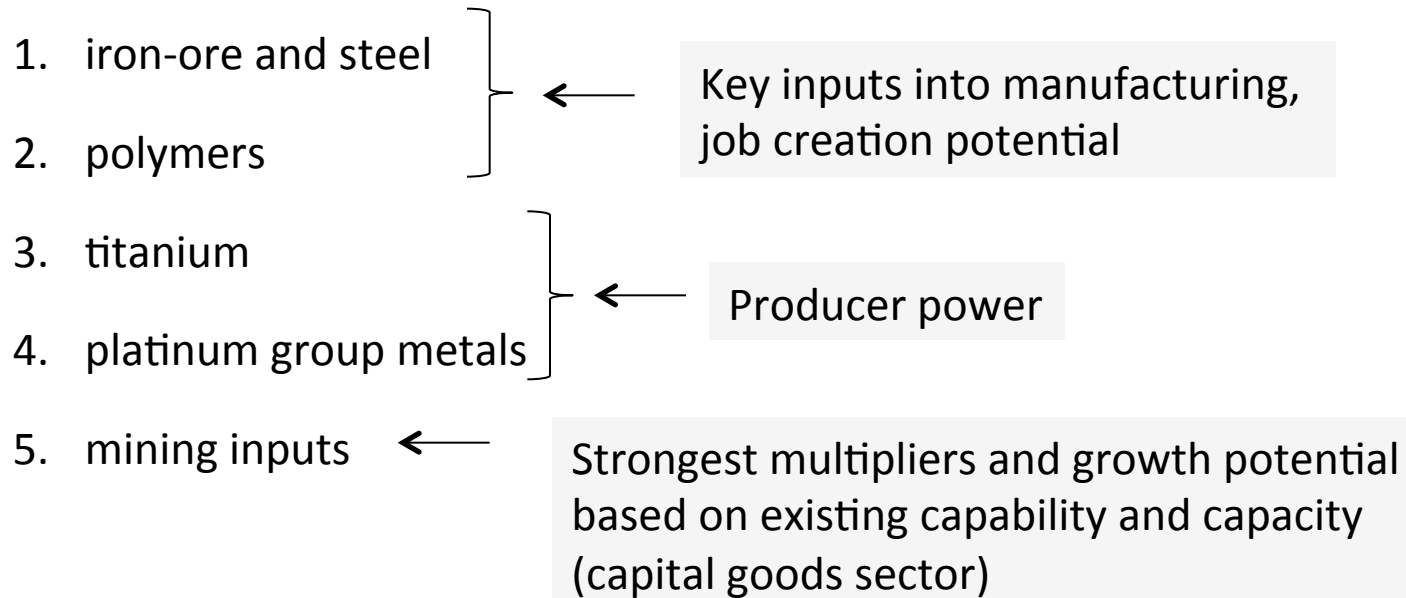
- Consumption of steel, aluminium, chrome and PGM's in metal products fabricated for the automotive industry
- Increased SA and regional demand, e.g. spending on infrastructure and mining projects providing localisation opportunities
- Special Economic Zones
- Beneficiation Promotion Programme (port tariffs)
- **the dti** has targeted competitive measures to increase exports (Export Councils)
- DST R&D initiatives and high level skills (Masters and PhD), **the dti** technology development and Incubation programmes
- **the dti** National Tooling Initiative and National Foundry Technology Network (development of local manufacturing capabilities)
- Incentives to stimulate energy efficient processing and beneficiation (including cogeneration from off-gases)

Threats

- Monopoly pricing of beneficiation inputs (steel, polymers, caustic soda, HCl)
- SA's competitiveness amidst rising global manufacturing and technology competition
- Increasing favour of imports over local products (services and manufacturing inputs are generally provided by agents of multinational companies sourcing their products and services abroad)
- High production costs locally
- Transport tariffs – High logistics costs affect manufacturing cost structures and revenues, as well as value-addition in manufactured goods and services

BENEFICIATION ACTION PLANS

Develop action plans to advanced backward and forward beneficiation across 5 priority value chains:



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INTERVENTIONS

Cross Cutting Policy levers

1. Industrial Policy Action Plan, BBBEE
2. MPRDA Amendment Bill
3. Competition Act amendment- regulatory measures for key inputs into labour absorbing sectors
4. Mining Charter (procurement, R&D, beneficiation equity off-set provisions)
5. TNPA's Beneficiation Promotion Programme

Interventions

1. Inter-departmental task team on iron-steel
2. Potential new player in the steel industry led by the IDC
3. Special Economic Zones with incentives to support value addition industries – projects on fuel cell development, jewellery manufacturing, coking coal and polymer production
4. Autocatalyst sector – develop high impact growth strategy to 30% of global production
5. Potential Resources Capital Goods Development Programme
6. Cluster development (plastics and minerals processing equipment cluster). SAMPEC- SA Minerals Processing Equipment Cluster established



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BENEFICIATION...THE WAY FORWARD

- Significant opportunities in unlocking the mineral linkages in the economy to drive industrial development and create jobs
- In order to achieve and sustain this we need a strong primary mining industry that can create new input and output industries
- Concerted combined public-private sector effort to develop competitive industries
- Harness the collective industrial capabilities of local firms
- Enabling, aligned policies and support measures



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THANK YOU

Umeesha Naidoo
Director: Minerals Processing
Email: unaidoo@thedti.gov.za



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