

MINERALS DEPENDENCE, JOBS AND TRANSFORMATION

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Structure of Presentation

- Scope of discussion
- Mineral sector and jobs in Africa's political economy
- Global crisis, SAPs and restructuring of mining sector
- The mineral sector and jobs since late 1980s
- Minerals and Industrialisation

Minerals and jobs in perspective

- Three possible levels:
 - Direct mining sector jobs including ASM and production for home markets
 - Jobs arising from various linkages
 - Economy wide job creation from revenue
- Numbers and types of jobs depends on 1) types and quantities of mineral and; 2) public policy
- Discussion focuses on first two levels

Foundations of mineral sector and jobs in Africa's political economy

- Precolonial mining part of integrated circuit of production, exchange and consumption within nation-states and across regions
- Key driver of colonization and centre-piece of colonial economy, foreign investment and foreign trade,
- Choice of exploited mineral driven by interests of colonial power and not local needs resulting in legacy of :
 - externalised mineral enclave and raw material commodity export dependence
 - economic vulnerability to international price volatility
 - Discouraging of indigenous/ASM production
- Mining and related transport services (ports, railways) pioneer sites in creation of industrial working class and trade unions which became important in anti-colonial struggles and post colonial politics (e.g. Ghana, Zambia, DR Congo, Guinea, South Africa, Mauritania)
- Nationalisation of mineral resources and mines key feature of post colonial policies with global assertiveness of ex-colonies
 - The mine –from local government to instrument of welfare state⁴

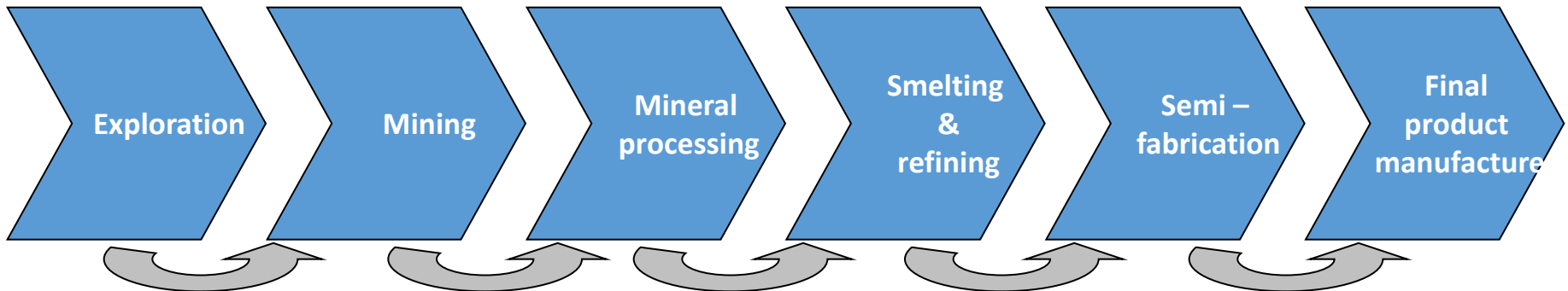
Main Stages in the Mineral Value Chain

The value chain for most minerals in Africa ends here

Developed countries complete the chain

Least value

Most value



1. Inputs

- Consulting services (surveying, drilling, design, bulk earthworks)
- Specialized equipment
- Utilities and raw materials
- Finance

Output/Sellable Product

- Run-of-mine ore for sale to miners

2. Inputs

- Run-of-mine ore
- Consulting services
- Specialized equipment
- Raw material inputs
- water and power
- Labour

Output/Sellable Product

- Concentrate for sale to traders

3. Inputs

- Concentrate
- Consulting services
- Specialized equipment
- Raw material inputs
- water and power
- Labour

Output/Sellable Product

- Refined product for sale at metal exchanges

4. Inputs

- Refined product
- Consulting services
- Specialized equipment
- Raw material inputs
- water and power
- Labour

Output/Sellable Product

- Semi-fabricated product for sale to manufacturers

5. Inputs

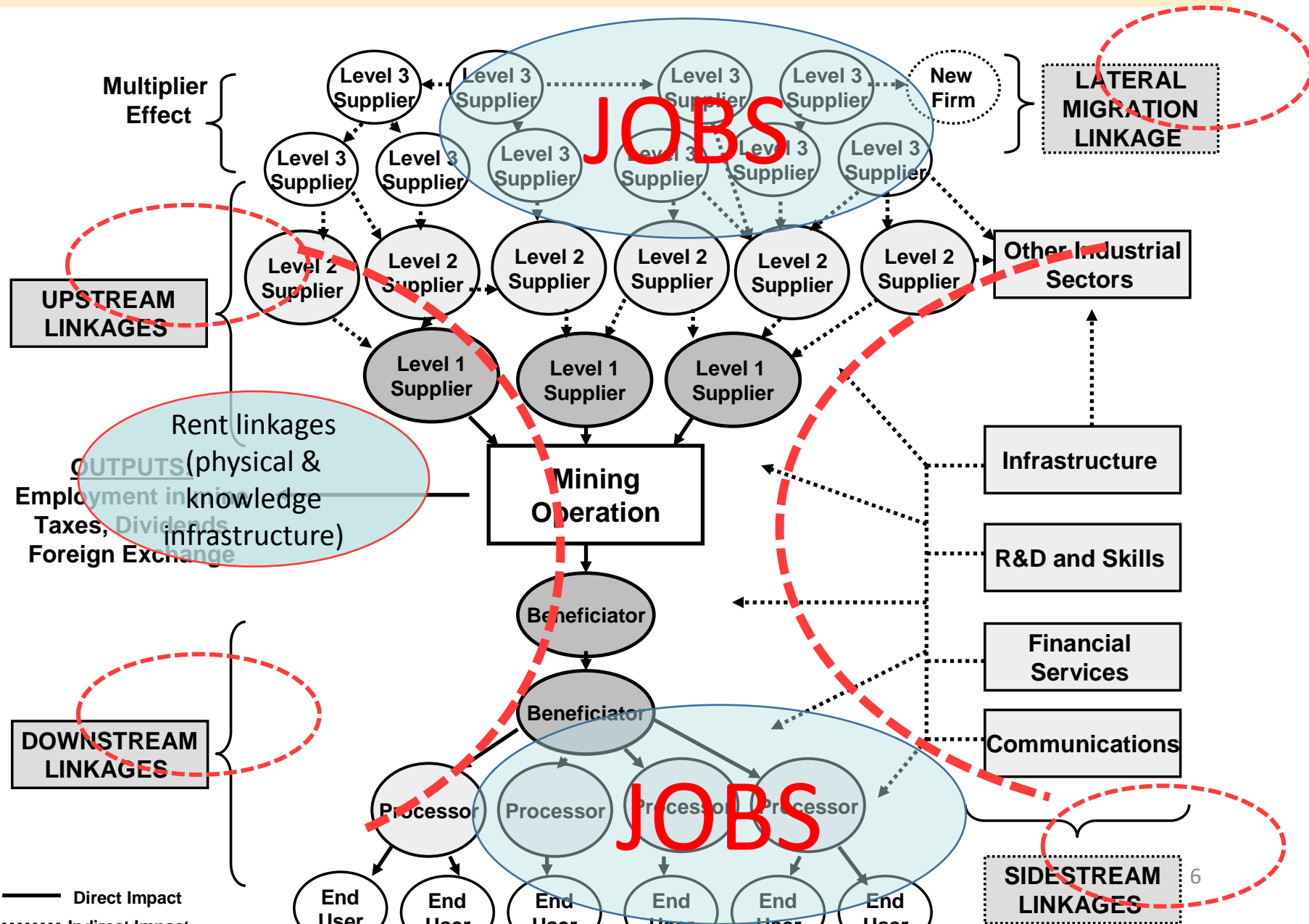
- Semi-fabricated product
- Consulting services
- Specialized equipment
- Raw material inputs
- water and power
- Labour

Output/Sellable Product

- Final manufactured product for use

Source: Adapted from Lydall, 2010

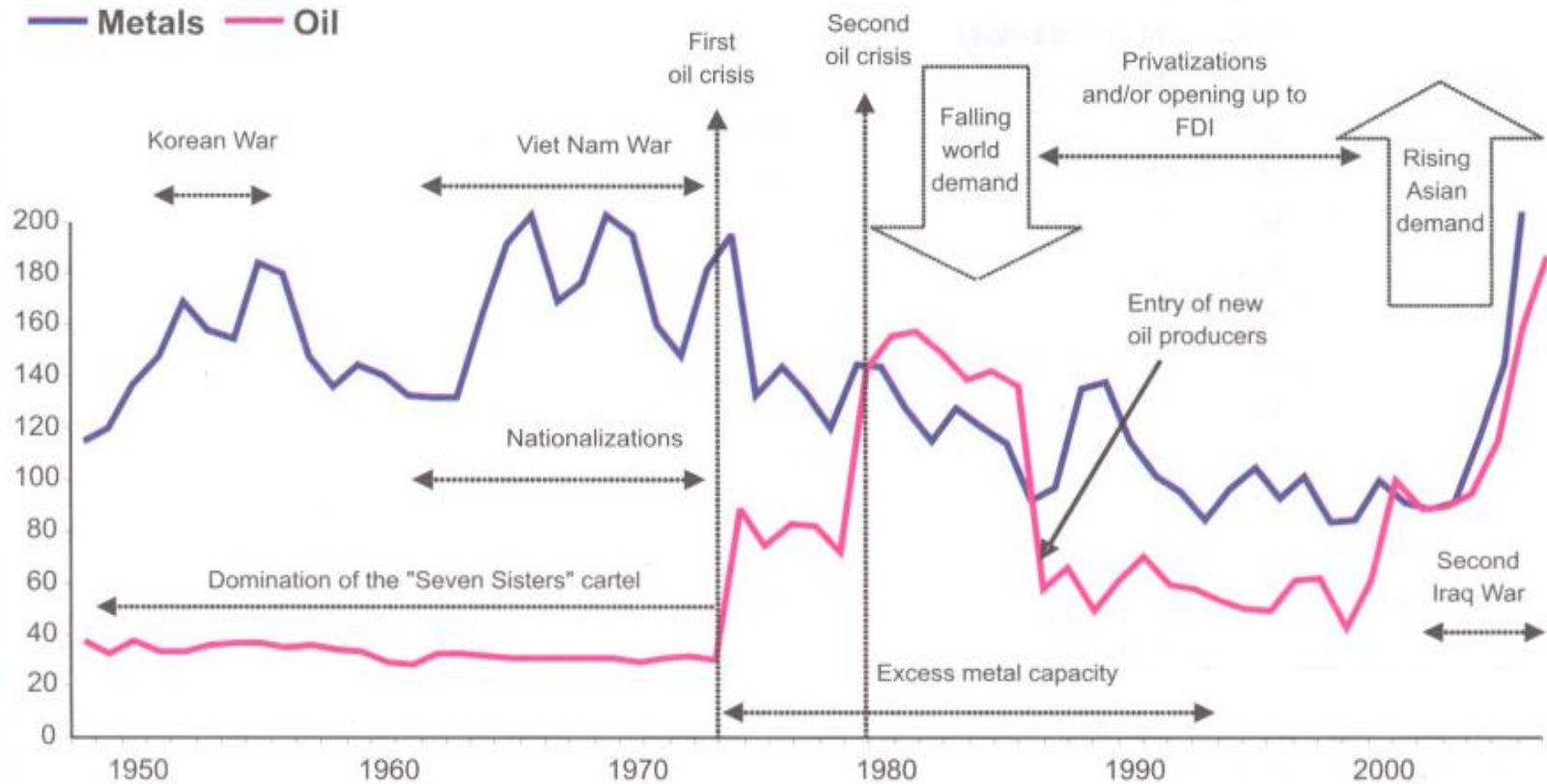
Types of linkages arising in the minerals industry and the relationship between firms



Global Economic crisis, SAPs and restructuring of mineral economy

- Global crisis on late 1970s/early 1980s
- Slump in Commodity prices and secular decline in terms of trade of commodity exporters, BoP crisis and debt
- Scramble for a new development approach
 - - LPA to Berg Report, SAPs and Export led growth strategy
Strategy for African Mining, FDI driven mining revival strategy

Real price index of crude oil and metallic minerals, 1948-2006 (Base year 2000 = 100)



UNCTAD and Radetzki,

Commodity Prices and Terms of trade losses 1970-2000

- Terms of trade declined by 24% and 21% respectively for North and Sub Saharan Africa
- Cumulative terms of trade losses in 1970-1997 represented almost 120% of GDP, a massive and persistent drain of purchasing power”. (World Bank, (2000))

Impact of terms of trade losses

- UNCTAD has estimated that the availability of these resources would have raised Africa's investment ratio by almost 6% in non-oil producing African countries and added 1.4% yearly to annual growth.
- This would give a per capita GDP of \$478 for 1997 instead of the actual level of \$323.
- If non-oil exporters in Africa had not suffered from continued terms of trade losses the per capita income would have been 50% higher in 2000 (UNCTAD, 2001).

Ruling Policy Regime established by SAPs

“The recovery of the mining sector in Africa will require a shift in government objectives towards a primary objective of maximizing tax revenues from mining over the long term, rather than pursuing other economic or political objectives such as control of resources or enhancement of employment. This objective will be best achieved by a new policy emphasis whereby governments focus on industry regulation and promotion and private companies take the lead in operating, managing and owning mineral enterprises.”

[Strategy for African Mining \(World Bank, 1992\)](#)

Mineral Development Strategy since mid 1980s

- State withdrawal from production and privatization of mining SOEs
- Emphasis on attracting foreign investment into sector
 - Creating enabling environment for FDI
 - Passage of laws, Creation of institutions and processes deemed necessary for development of FDI based export led mineral development strategy
 - Overgenerous incentives regime (e.g. tax exemptions and low rates, foreign procurement, forex retention, liberal labour regime – sub-contracting, no employment or local content targets)
- Focus on developing minerals with export value
- Neglect of production for home markets/hostility to ASM
- Revenue stream main planned benefit of mining, linkages incidental
- Ghana Mining Law of 1986 pioneer

Privatisation and job losses

- Across Africa the reforms which enabled the creation of the current mining regimes involved the laying off of tens of thousands of mining workers as loss making state owned mining firms were dismantled or unbundled and sold off to foreign investors. For example between 1991 and 2001 the number of workers employed in Zambia's copper industry fell from over 56,000 to around 19,000 as the parastatal Zambian Consolidated Copper Mines (ZCCM) was broken up and privatised

Mining sector performance since reforms

- Reforms triggered revival and expansion of old mining sectors (.e.g Ghana, Zambia) and new large scale sectors and employment (e.g. Mali, Tanzania and Burkina gold industry)
- Main export earner for a number of countries in West Africa (Ghana, Sierra Leone, Guinea, Mali, Liberia)
- In SADC the mining sector plays an important role to a varying degree in the different economies; contributing 22percent (US\$ 92 billion) towards the total regional output and 13percent (3.2 million jobs) towards regional employment.
- Growing demand for mineral and rising prices have driven African economic growth since 2000

New mining regime and jobs

- Concessions for new large scale mines have dispossessed and displaced tens of thousands of rural producers farmers and destroyed jobs
- ASM was displaced in some countries by large scale mines
- ASM has generally expanded across Africa especially in precious and semi-precious minerals (gold and gem) and building inputs, estimated at 5 million
- Revival and expansion of mining created new jobs in large scale and supporting sectors
- By 2006 direct mining sector employment in Zambia had edged up to over 31,000, a notable rise from the 2001 level.
- According to an ICMC study (2008) Tanzania's large scale mining sector had created under 8,000 direct jobs
- Ghana 17,000 directly employed in large scale mining (2009)
- South Africa about 500 000 workers directly employed (2010), decreasing share of labour force

Labour regime of reform era

- Casualisation and contract labour
 - South Africa since early 1990s (Marikana)
 - Zambia casuals half by 2008
 - Tanzania nearly half of Geita workforce in 2006
- South Africa decreasing foreign workers since end of apartheid from over 70% to around 30%
- Pay differentials –
 - Bosses versus workers
 - locals versus expatriates
 - In many cases the direct mining jobs are well paid relative to wages in the wider national economy though in some cases it has been pointed out official minimum wage levels fall some way below the cost of a basket of basic needs (Zambia).
 - Unions have also complained about discriminatory practices against local employees in favour of expatriates. In 2007 workers at Barrick's Bulyanhulu gold mine in Tanzania went on strike in protest against Tanzanians being paid less than expatriates for the same work and in 2009 workers at AngloGoldAshanti's Ghana operations went on strike over the same issue.

Mining and indirect jobs

- The job creating impact of the new mines limited because capital intensive large-scale mineral extraction generally offers limited employment opportunities” (UNCTAD, WIR,2007).
- According to the UNECA (ERA,2005) data from foreign affiliates of U.S. firms in Africa show that manufacturing FDI is 17.5 times more labour-intensive than mining FDI.
- Pressure/criticisms about low employment and poor linkages contribution of mining leading to campaign to highlight indirect job creation:
 - In Ghana one firm Newmont claimed 1,920 direct jobs and 41,000 indirect jobs (2011)
 - Tanzania 45,000 (8,000) indirect jobs (ICMM, 2008).
 - South Africa 500,000 (2010) workers in indirectly related jobs

Lopsided returns on mining FDI

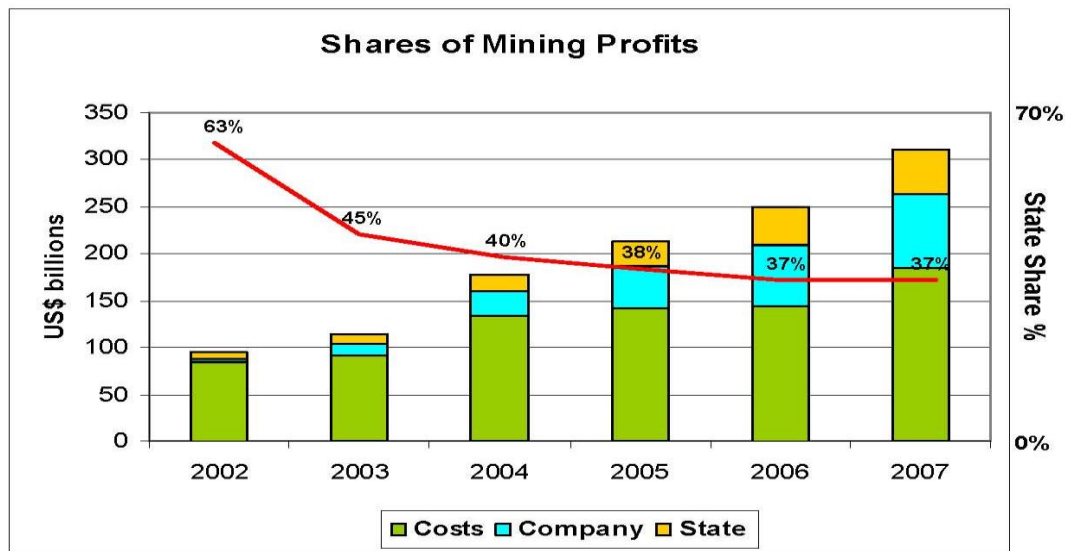
Between 2002-2007 average prices of minerals and metals rose by 260%.

Between 2002 and 2006 average net profits of biggest mining firms increased by more than 1,400%, going up by 64% between 2005 and 2006 alone. (PWC,2007)

- In contrast between 2003-2010 average revenue increased by 23%.
- Windfall gains for developing countries “have been partly offset by increased profit remittances by transnational corporations” -UNCTAD
- Cross country studies have shown that many mining taxation regimes are regressive with governments’ share of mining revenue of falling as the profitability of operations rise.

How were profits shared during the boom?

- Sorting out reality from perception is a significant challenge because of limited transparency and delays in revenue reporting
- For a global perspective we have drawn on PWC's annual survey of the top 40 international mining companies
- This is a narrow sample and results have to be treated with great caution



PWC Top40 survey of mining company results*

State Share = PWC reported income taxes paid + 5% of gross revenue as a proxy for royalty and duties paid

Excludes dividend withholding taxes and dividend receipts from state equity

* PWC report "Mine*:As good as its gets?", 2008

From Bryan Land (World Bank) presentation "Taxing the Minerals Industry in Turbulent Times", 2009

Beggar thy neighbor - harm yourself

- Mutually damaging race to the bottom among African countries in contest for FDI

- e.g. changes in Ghana's 2006 Mining Act

“some observers have described the incentive competition as a “winner's curse” for host countries, whereby investment competition among host countries can trigger a “a race to the bottom” not only in the more static sense of forgone fiscal earnings but also in terms of giving up policy options necessary to organize a more dynamic long term growth path” (UNCTAD,2005)

Cracks in the front

[It is] enigmatic is that poverty in Africa is chronic and rising ... despite significant improvements in the growth of African GDP in recent years. The implication: poverty has been unresponsive to economic growth.

Underlying this trend is the fact that the majority of people have no jobs or secure sources of income.

Various reasons have been given for Africa's lack of response of poverty to economic growth.

- Growth has been concentrated in the traditionally capital-intensive extractive sector
- Inequality in the distribution of opportunities created by economic growth.

(UN-ECA 2005 Economic Report on Africa)

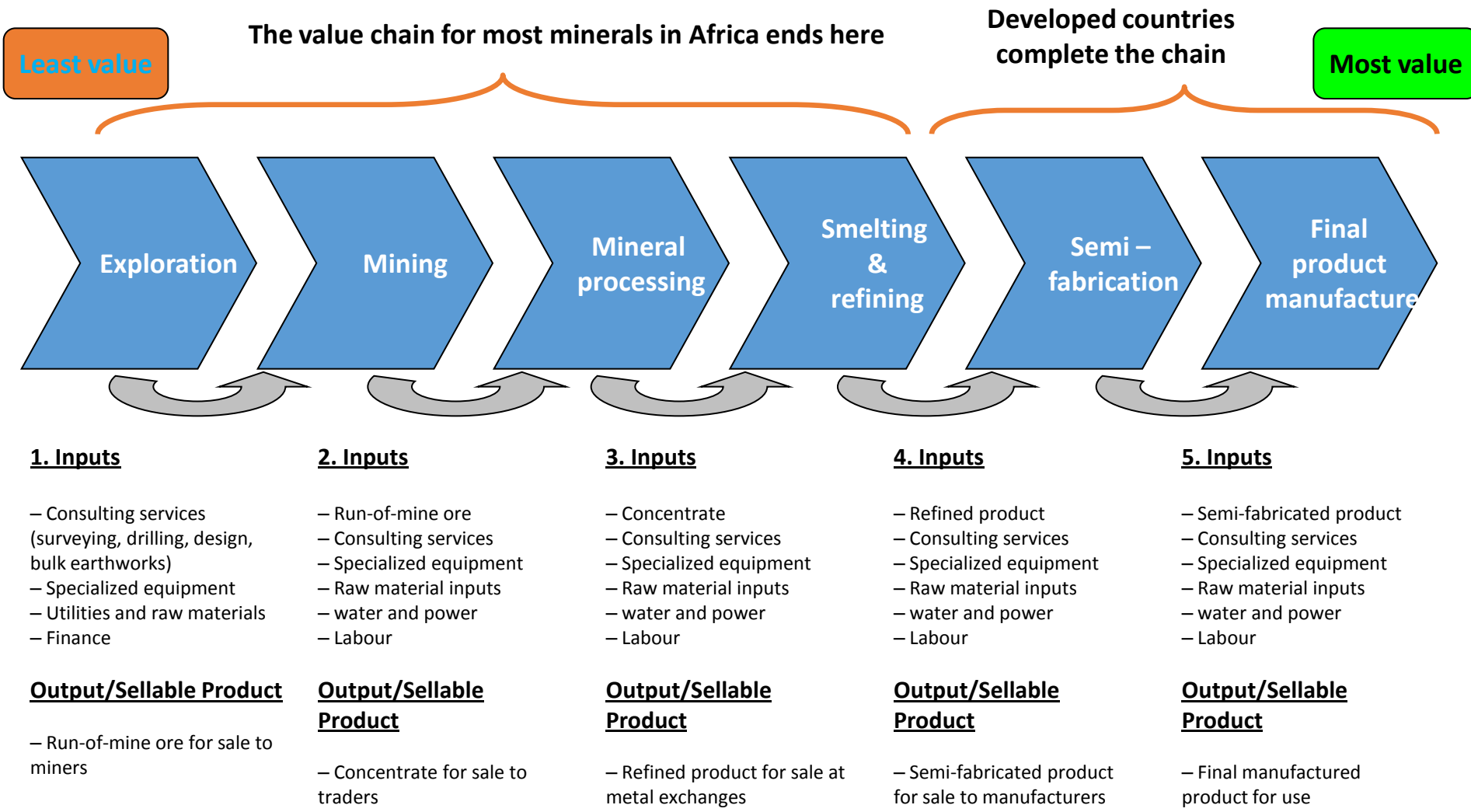
“impressive growth story has not translated into economic diversification, commensurate jobs or faster social development: most African economies still depend heavily on commodity production and exports, with too little value addition and few forward and backward linkages to other sectors of the economy.”

(UNECA 2013 Economic Report on Africa)

Beyond FDI=Revenue Towards Structural Transformation

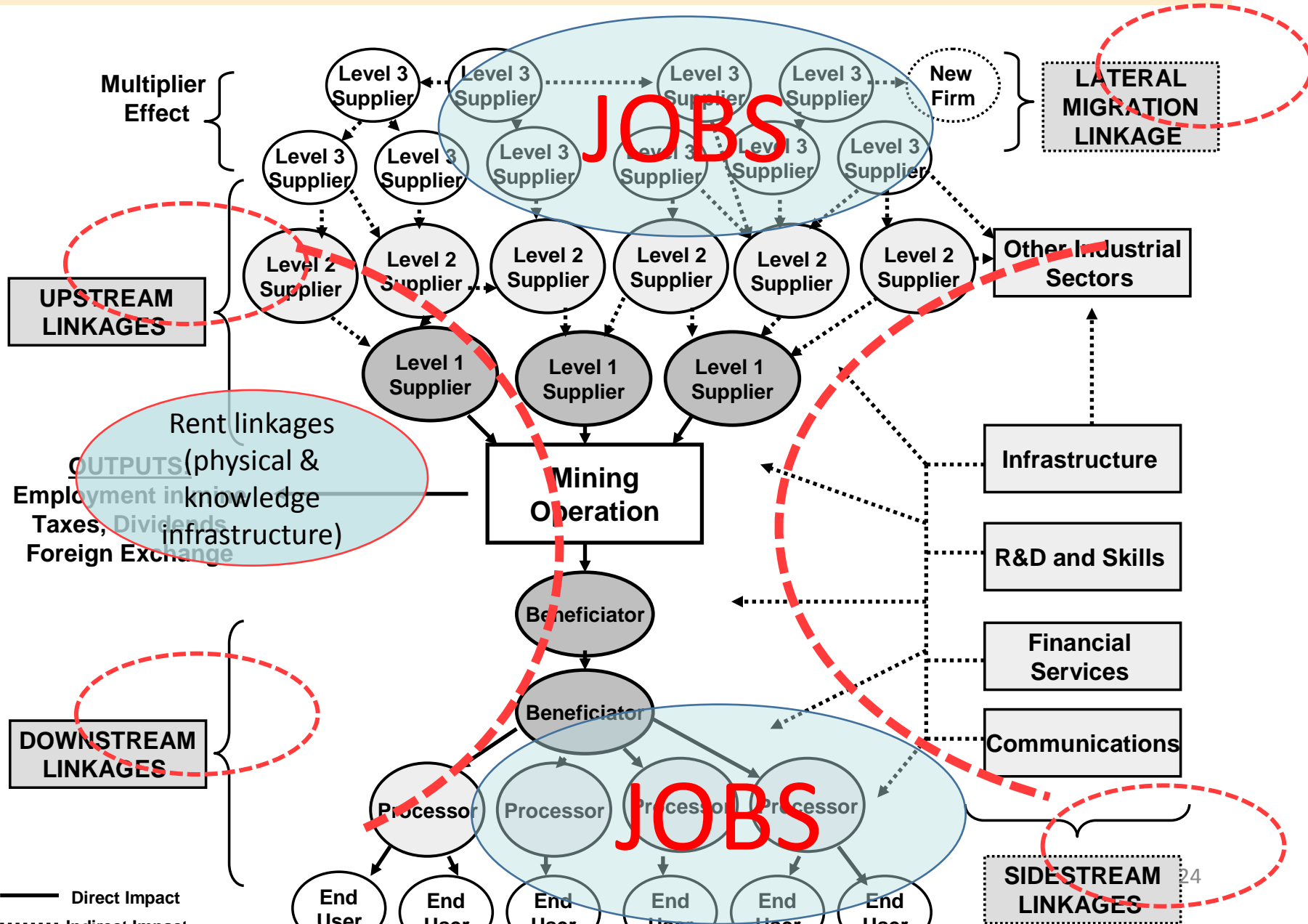
- Is mineral based industrialisation an option?
- Official acceptance of need for structural transformation centred around industrialisation
 - Africa Vision 2063, Action Plan for the Accelerated Industrial Development of Africa (AIDA) African Common Position post 2015, EAC plan, ECOWAS MDP
- Africa Mining Vision (2008; 2009)
- ISG Report 2011
- World Bank 2011
- Official Reports - Economic Report on Africa editions, Africa Economic Outlook editions;
- Academic - Morris, Kaplinsky and Kaplan – One thing leads to another – Promoting Industrialisation by making most of the Commodity Boom in SS Africa (2012)

Main Stages in the Mineral Value Chain



Source: Adapted from Lydall, 2010

Types of linkages arising in the minerals industry and the relationship between firms



Resource-based Industrialisation?

FISCAL: Capture & invest of resource rents (RRT) in long-term economic physical & human infra (inter-generational equity – capital transformation)

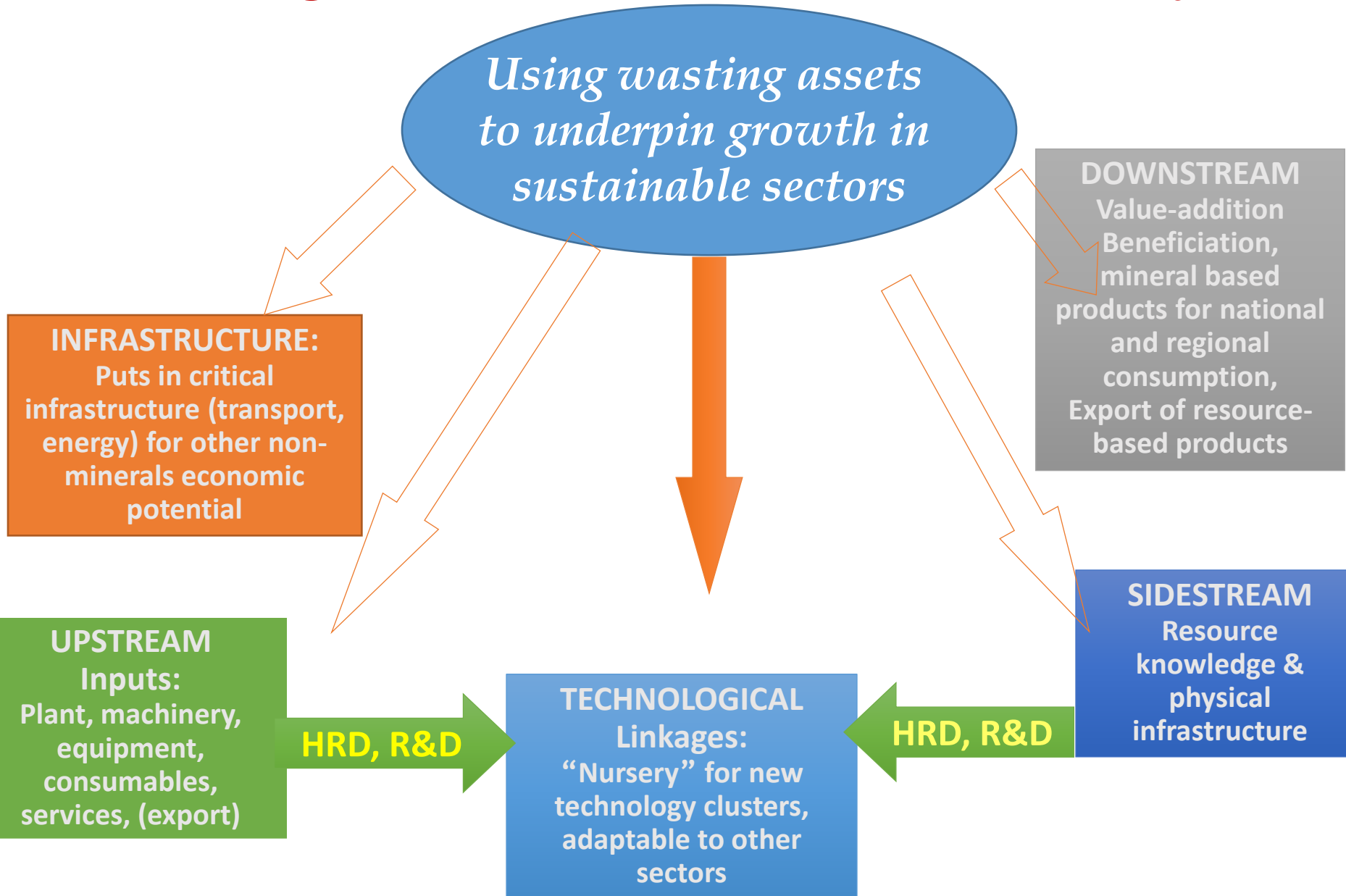
SPATIAL: Puts in critical infra-structure (transport, energy) to realise/support other economic potential & intra-regional trade

BACKWARD: Inputs: Capital goods, consumables, services, (also export)

KNOWLEDGE Linkages: “Nursery” for new tech clusters, adaptable to other sectors

FORWARD Value-addition: (beneficiation), Export of mineral-based articles/products

Linkages with Sectors of the Economy



Essentials of African Mining Vision

- A knowledge-driven African mining sector that catalyses & contributes to the broad-based growth & development of, and is fully integrated into, a single African market through:
- Down-stream linkages into mineral beneficiation and manufacturing;
- Up-stream linkages into mining capital goods, consumables & services industries;
- Side-stream linkages into infrastructure (power, logistics; communications, water) and skills & technology development (HRD and R&D);
- Mutually beneficial partnerships between the state, the private sector, civil society, local communities and other stakeholders;

Essentials of AMV -2

- A mining sector that has become a key component of a diversified, vibrant and globally competitive industrialising African economy;
- A mining sector that has helped establish a competitive African infrastructure platform, through the maximisation of its propulsive local & regional economic linkages;
- A mining sector that optimises and husbands Africa's finite mineral resource endowments and that is diversified, incorporating both high value metals and lower value industrial minerals at both commercial and small-scale levels;

AMV Action Plan (2011)

- Action plan clusters
 - Mining Revenues and Mineral rents management
 - Geological and mining information systems
 - Building human and institutional capacities
 - Artisanal and small scale mining
 - Mineral sector governance
 - Research and development
 - Environment and social issues
 - Linkages and diversification
 - Mobilizing mining and infrastructure investment
 - Resourcing the Action Plan and the AMV
- Levels – national, regional and continental
- Actors – States, private sector, CSOs and IFIs

What are some of the constraints to deepening the transformative role of minerals development?

Lack of deliberate policy thrust at national and/or sub regional level –

- ✓ Bold policy approach to deepen role of the sector, compel companies to invest in local beneficiation

Infrastructure Deficit-

- Roads, rail, energy key requirements for the sector
- Poor collateral use of infrastructure, especially cross-border infrastructure (3rd party access at non-discriminatory prices)

Mineral Financing models

Require long off-take agreements often linked to offshore enterprises, limited domestic resources

Trade and Investment Rules-

- WTO/EPAs: import tariffs (upstream), export taxes (downstream), IP (tech transfer), etc.

• Policies of consuming countries

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What are some of the constraints to minerals industry-led structural transformation?

Human and institutional Capacity

lack of required skills for linkages industries development- regional skills centres of excellence,

limited R&D capacity – could a regional approach be potent?

Weak negotiating capacity to stipulate linkage, capacity, etc conditions/milestones –

Weak capacity to audit the mineral value chain – are we collecting requisite taxes

Procurement Strategies of Companies-

Centralised procurement strategies, economies of scale (small markets),

weak local business sector, limited access to capital, etc

- Nature of the state and elites – national and regional
- Weak constituency for change

What should Africa do to harness the linkage and beneficiation opportunities for structural transformation?

• **Regional Integration:**

- Exploit resources integrity - RBI
- Develop larger (common) markets through the African Economic Community
- Common investment approaches/end race to the bottom

• **Build State Capacity:**

- Enhance state capacity to negotiate contracts to optimise linkages and Competitive & Transparent Concessions of all known resources to achieve “price discovery”. Make rent & linkage optimisation key selection criteria; audit mineral value chain
- Reinvest rents into systematic geo-survey (knowledge infrastructure) to increase known mineral asset basket –enhances bargaining position;

• **Integrate Sector into the broader economy:**

- Create business environment & institutions. X border spatial development (SDIs: Development Corridors);
- Downstream promotion: Judicious use of export tariffs (EPA), enabling environment (physical & knowledge infra); consider royalty rates based on degree of beneficiation;
- Upstream promotion: Knowledge infrastructure (HRD & R&D), targeted infant industry import tariffs

What should Africa do to harness the linkage and beneficiation opportunities?

- **Optimal Resource Rent Capture and Use:**
 - Capture (RRTs) efficiently and invest into physical & knowledge infrastructure –
 - regional development funds/infrastructure development.
- **Develop infrastructure:**
- **Science, Technology and Innovation:**
 - tech levels & foster innovation: local HRD & R&D,
 - reinvest rents in HRD & R&D,
 - incentives for R&D and HRD
 - Stipulate innovation quotas;

What should Africa do to harness the linkage and beneficiation opportunities?

- **Local Content and Local Wealth Creation**
 - Indigenisation targets/milestones.
 - State-local equity targets: local equity “price discovery”
 - Procurement – manpower, inputs
 - Role of a developmental state, including state mining companies, local junior companies
 - Domestic resources for RBI
- Learn from other experiences within and beyond Africa
- Build constituency for Change