



# STATE OF MINING SECTOR 2021 DATACENTRIX MINING INDABA 2 SEPTEMBER 2021

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# Introduction to the Minerals Council



We are a mining industry employers' organisation that supports and promotes the South African mining industry.



We serve our members and promote their interests by providing strategic support and advisory input. We facilitate interaction among members to examine policy issues and other matters of mutual concern to crystallise and define desirable industry standpoints.



We act as a principal advocate to government, to state-owned enterprises, communicating major policies endorsed by our members. We represent the industry internationally.

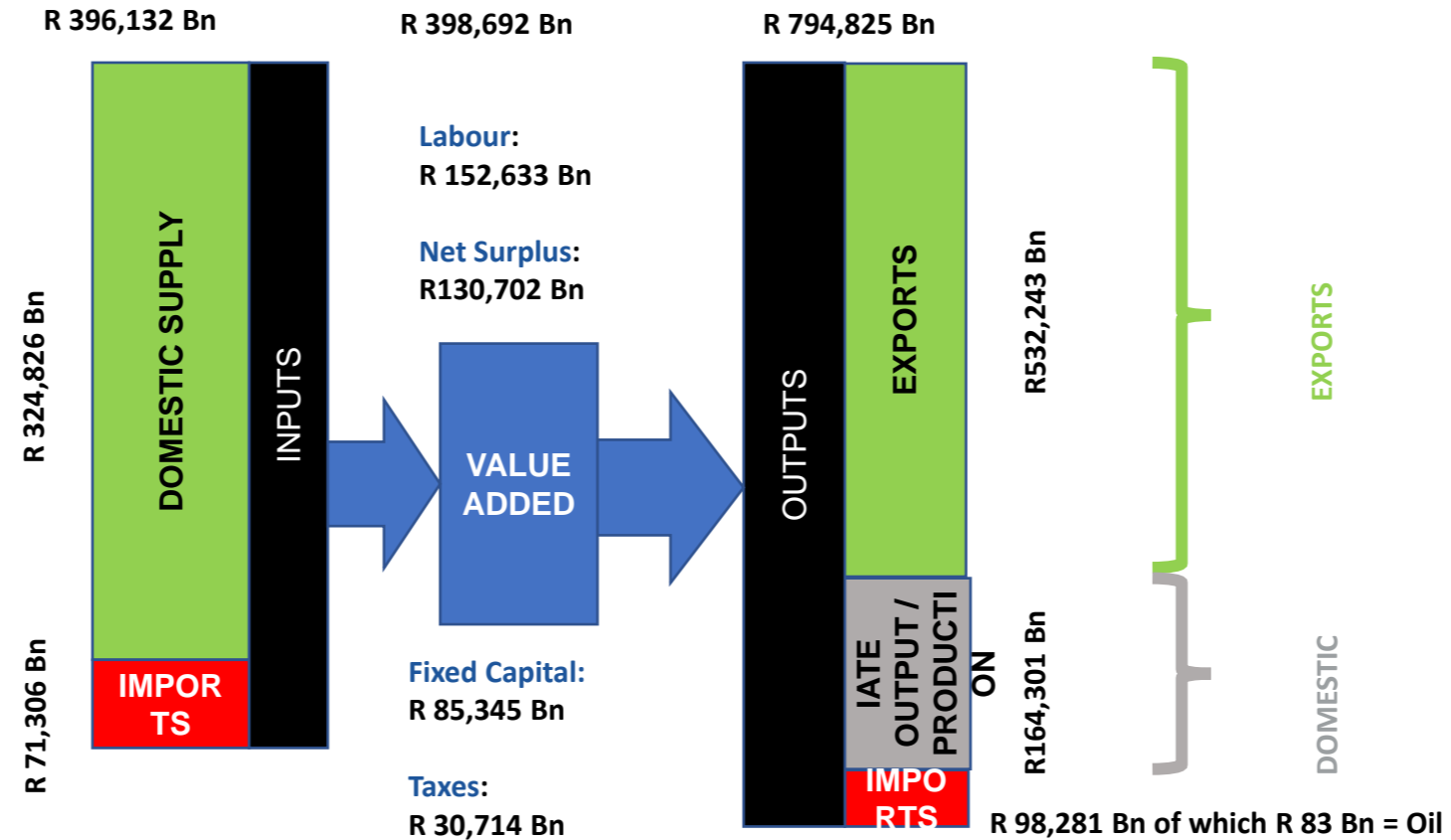


In some sectors, we undertake collective bargaining with organised labour on behalf of members.



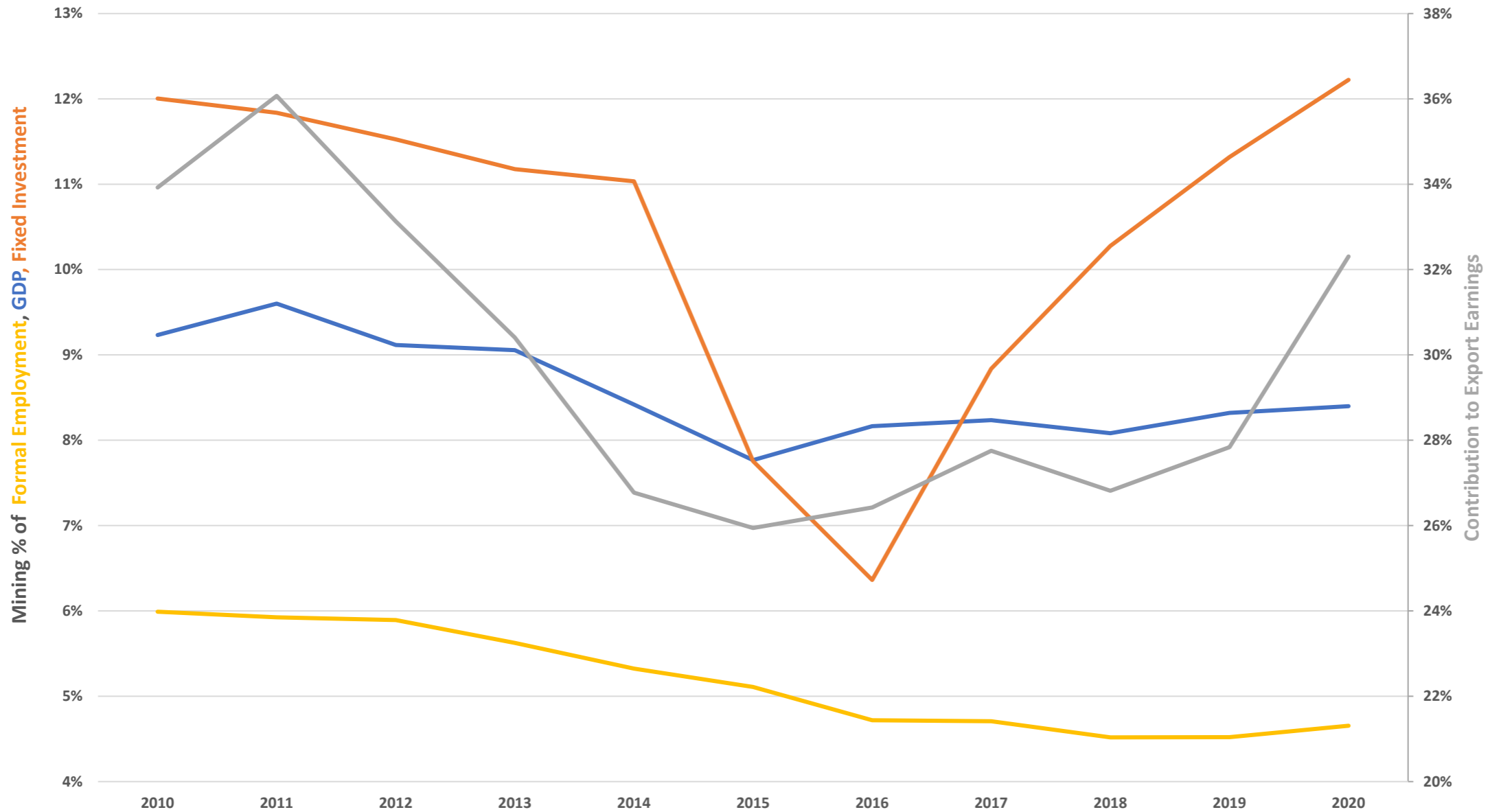
# Mining Sector Structural Statistics

# Mining Sector GDP Components

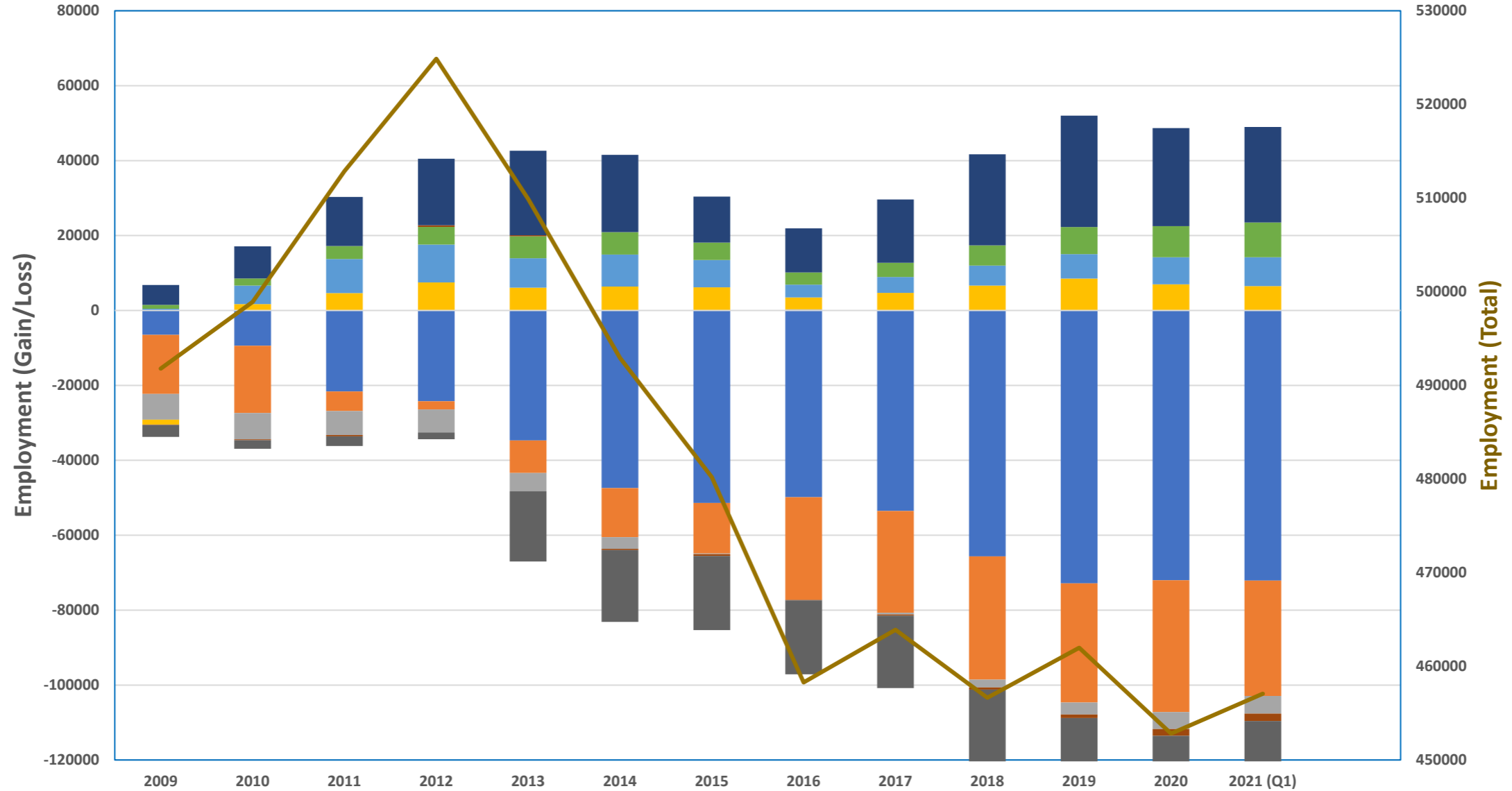


Sources: Statistics South Africa, Minerals Council SA, Quantec

# Mining Contribution to Economy



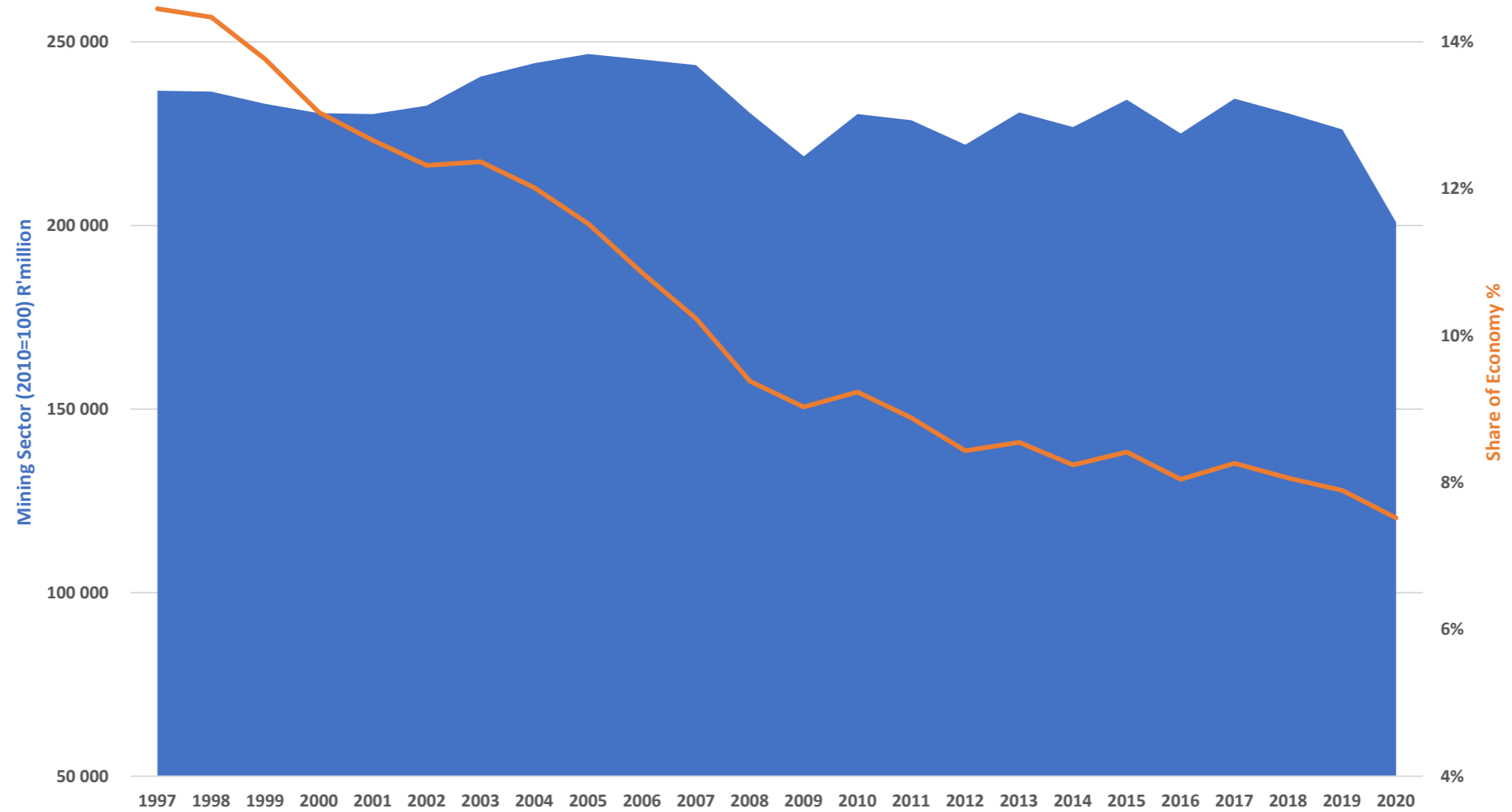
# Employment (Gain/Loss) per Commodity



Other Minerals
  Coal
  Industrial Minerals
  Manganese
  Iron Ore
  Chrome
  Diamonds
  PGM
  Gold
  Total
  Non Ferrous

# Mining Contribution to GDP and Share (%)

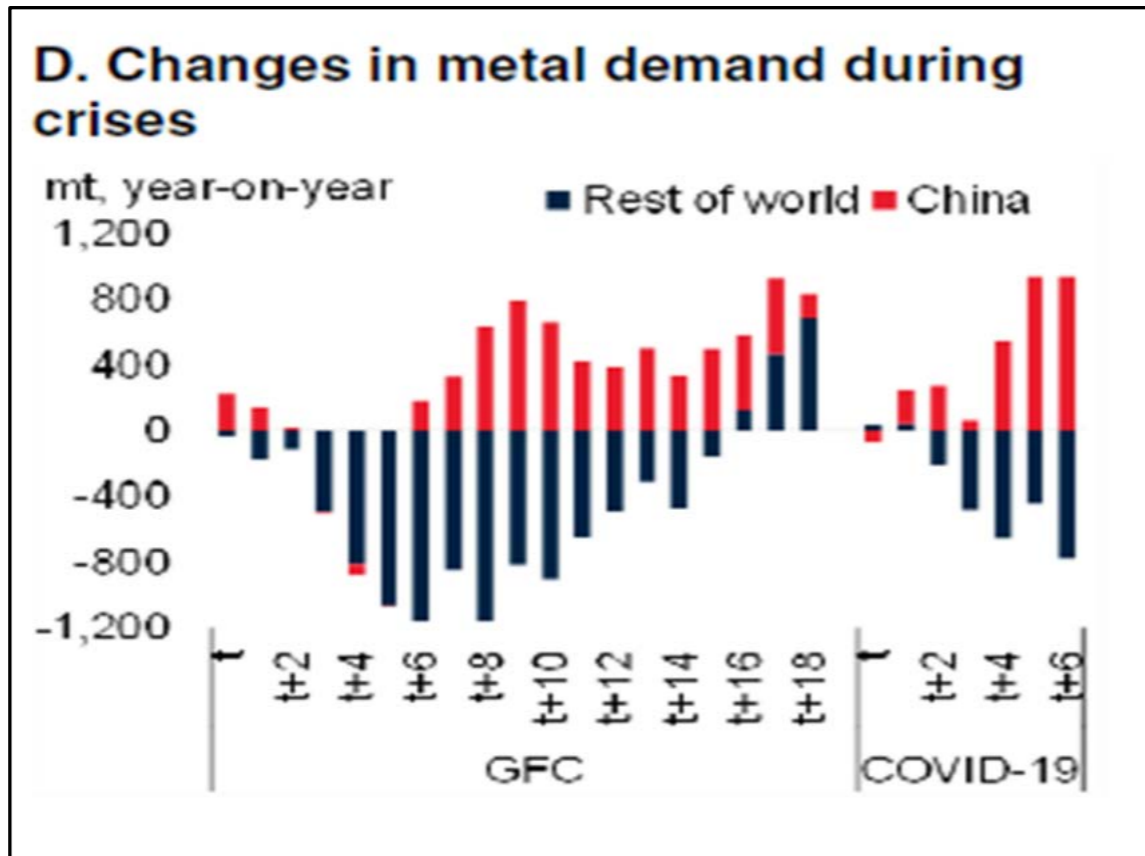
2020 Nominal GDP = R371,9 billion





# Analysis of the Covid19 induced shock & GFC

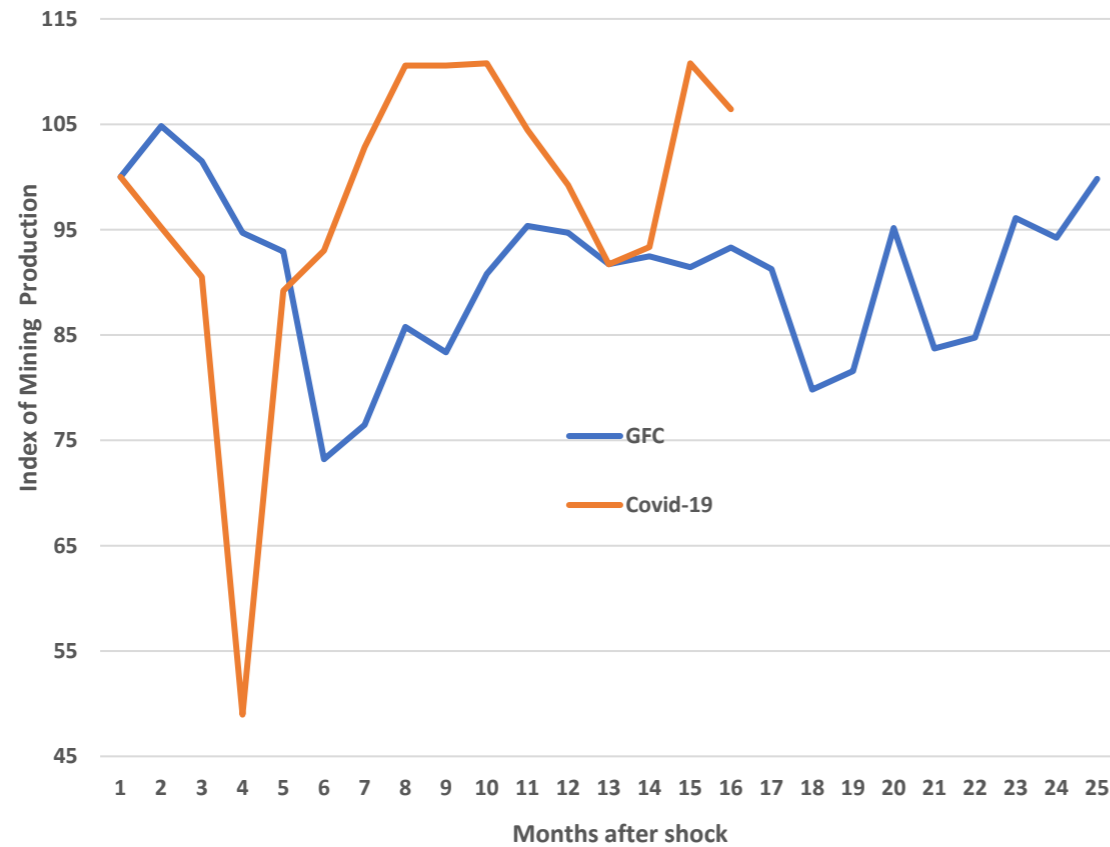
# Analysis of the Covid19 induced shock & GFC



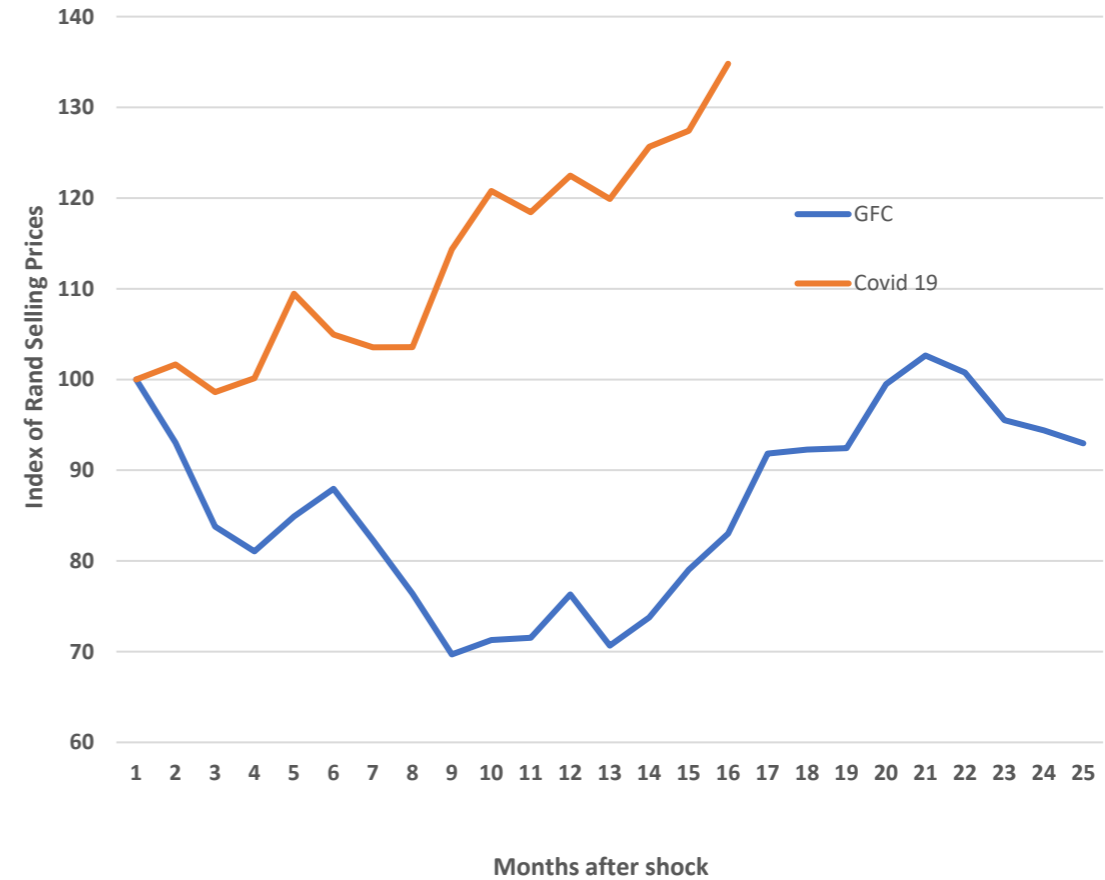
- The main difference between the two events seems to be changes in world demand for metals and its impact on commodity price movements.
- Research by the World Bank shows the differential demand responses to the two crises;
- Chinese demand shows a very small, and short-term impact due to the Covid-19 situation compared to the global financial crisis (with the rest of the world also showing a smaller impact).
- The definitive result is the different impact on (SA relevant) commodity prices

# Analysis of the Covid19 induced shock & GFC

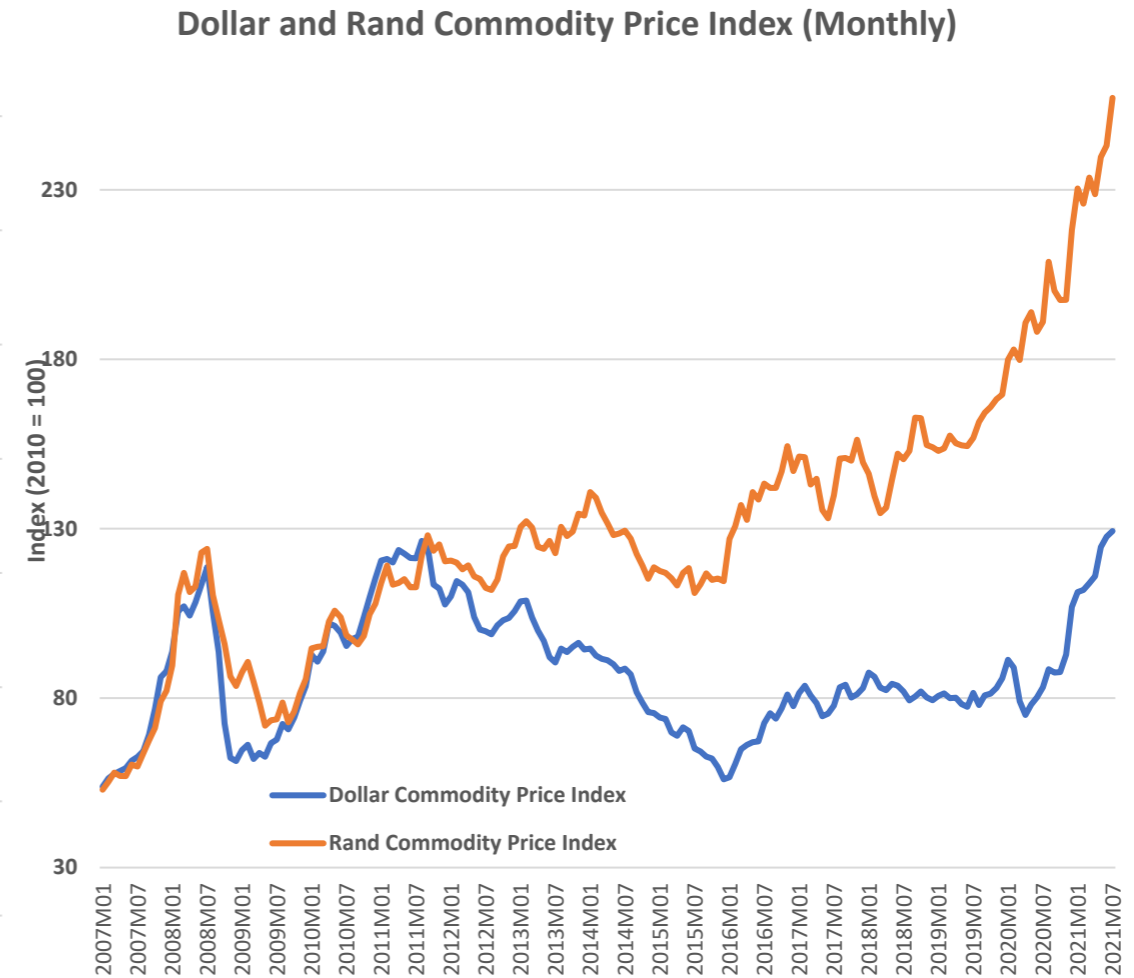
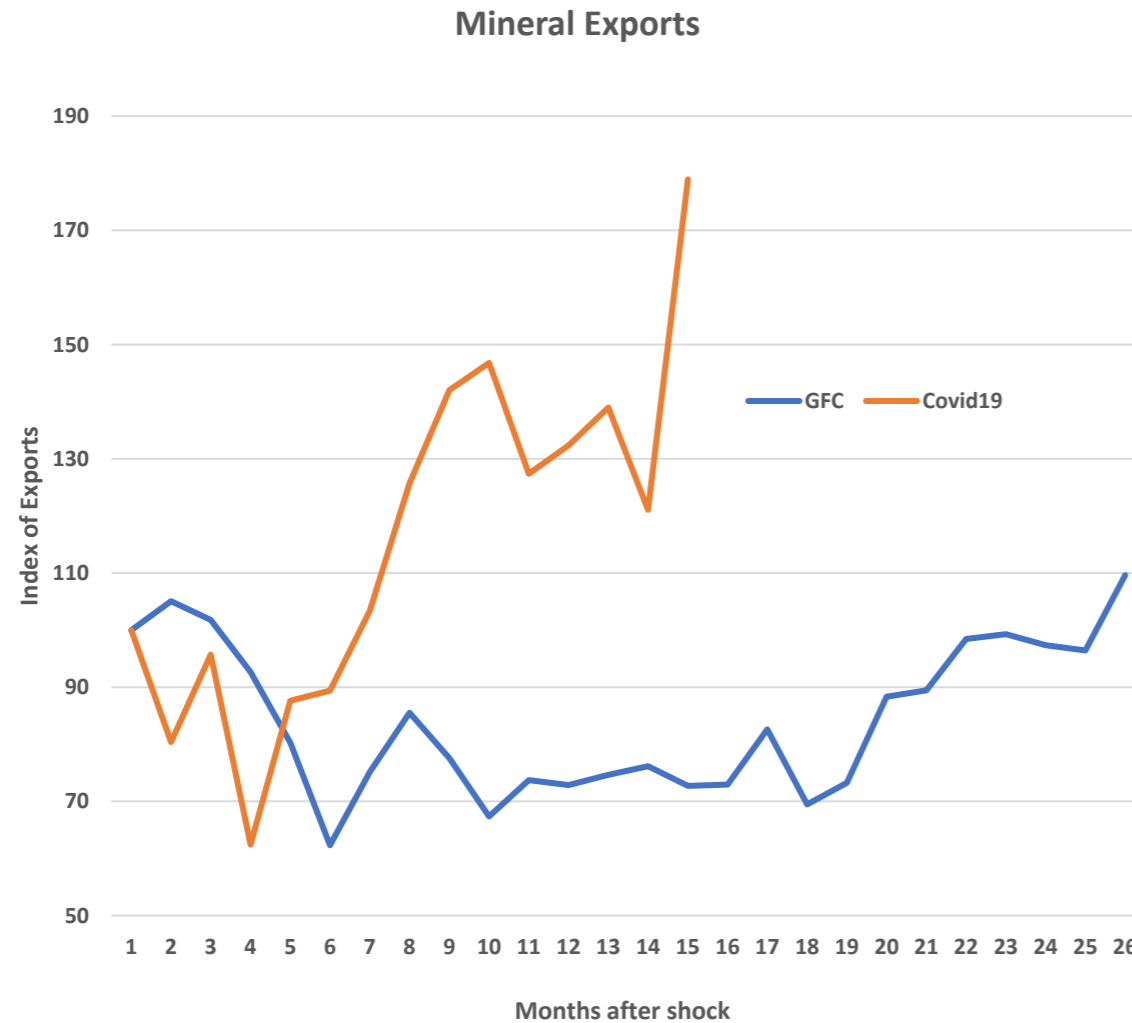
Mining Production Reponse to GFC & Covid19 Shocks



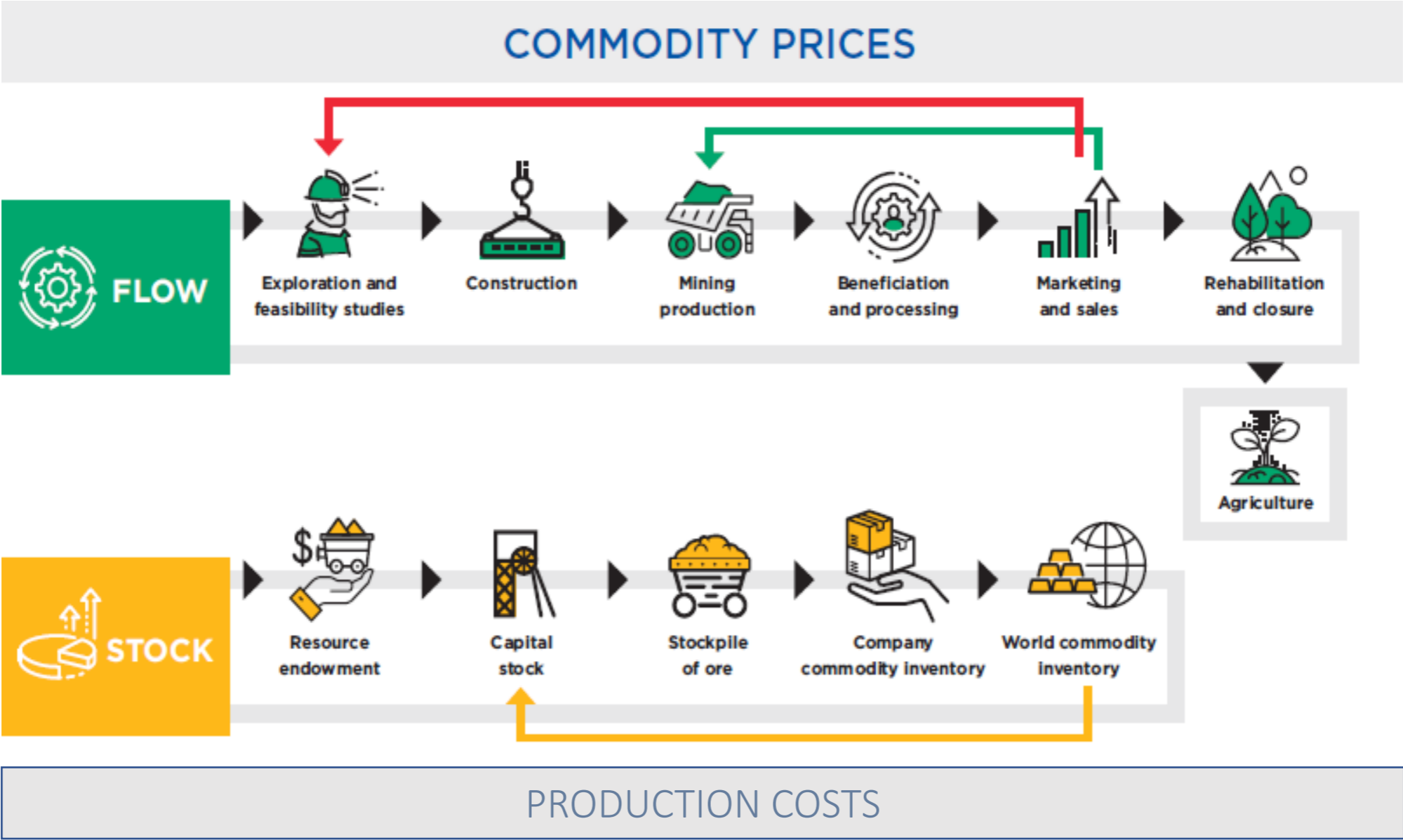
Rand Selling Prices (Index)



# Analysis of the Covid19 induced shock & GFC



# Rhythms of the Mining Sector





# Exploration

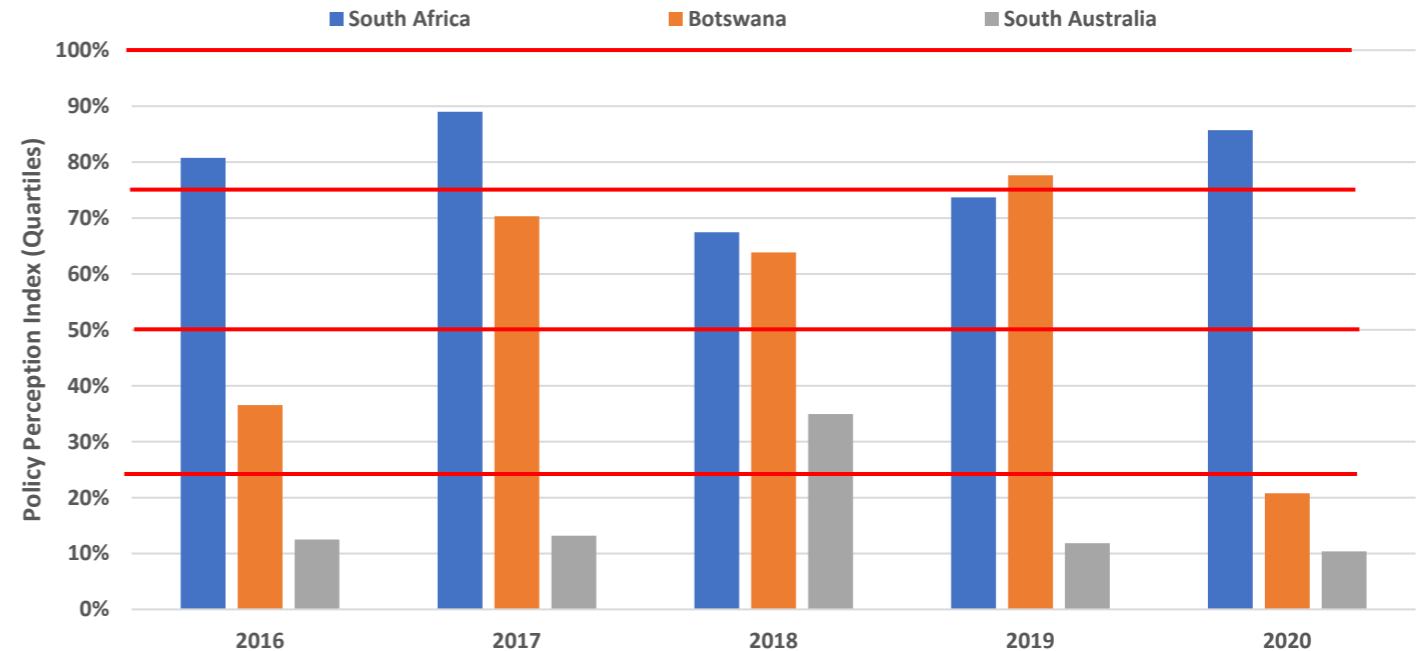
# South Africa's Reserves relative to the World 2020

## South Africa's contribution to world mineral reserves: 2020

Commodity	Unit	South Africa reserves	World reserves	%
Antimony (metal)	kt	27	1,500,000	1.8
Chromium	Mt	200,000	500,000	40.0
Gold (metal)	t	6,000	57,000	10.5
Iron Ore	Mt	770	82,000	0.9
Manganese (metal)	kt	200,000	690,000	28.9
Nickel	Mt	3,700	78,000	4.7
Platinum Group Metals	t	63,000	67,000	94.0
Uranium (metal, up to \$US80/kg U)	t	279,100	–	5.2
Zirconium minerals (metals)	kt	14,000	75,000	18.6

# Policy Perception Index

- The PPI measures the opinions of mining companies about the effects of policy. The survey questions;
  - Uncertainty concerning administration
  - Interpretation and enforcement of existing regulations
  - Environmental regulations
  - Regulatory duplication and inconsistency
  - Taxation
  - Socio economic agreements
  - **Geological database**
- (Last quartile 75-100 is worst)

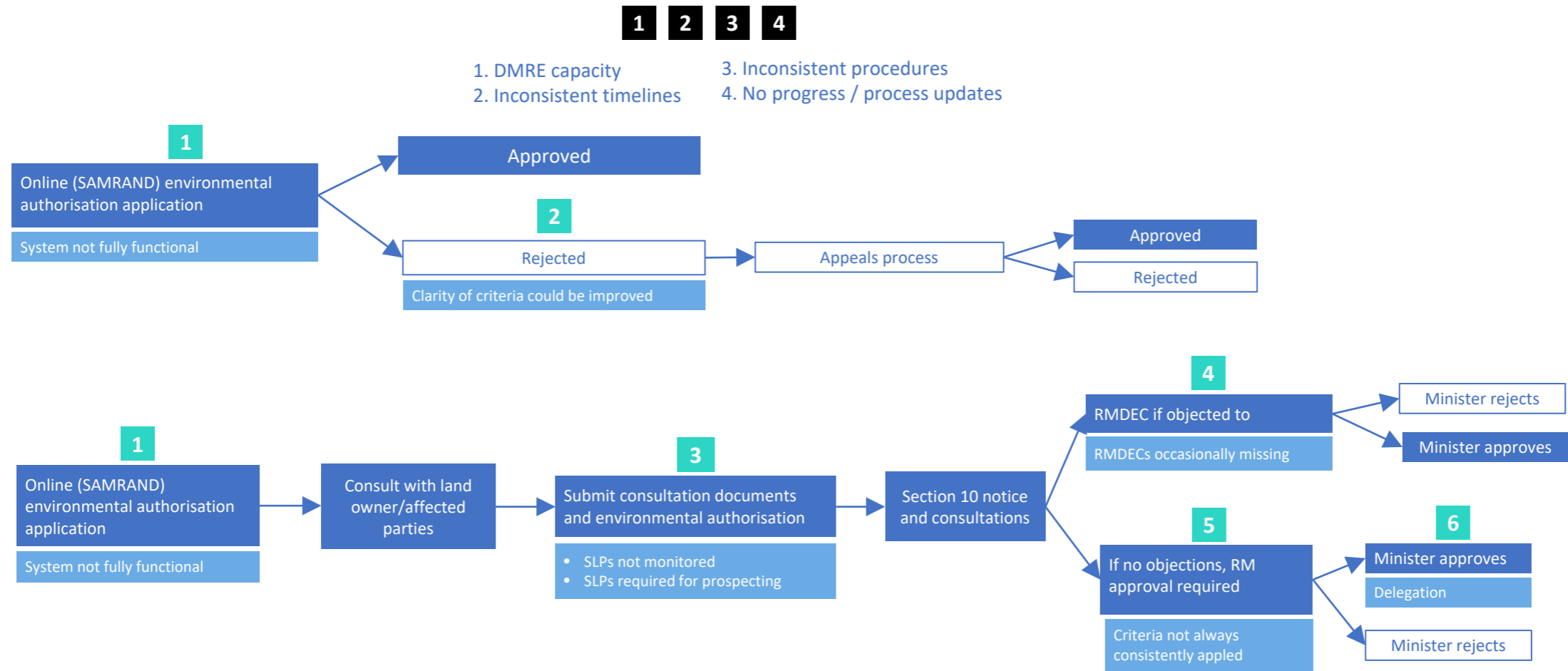


# Average period for approval of mining rights

Botswana vs. SA  
(almost 7 times longer)

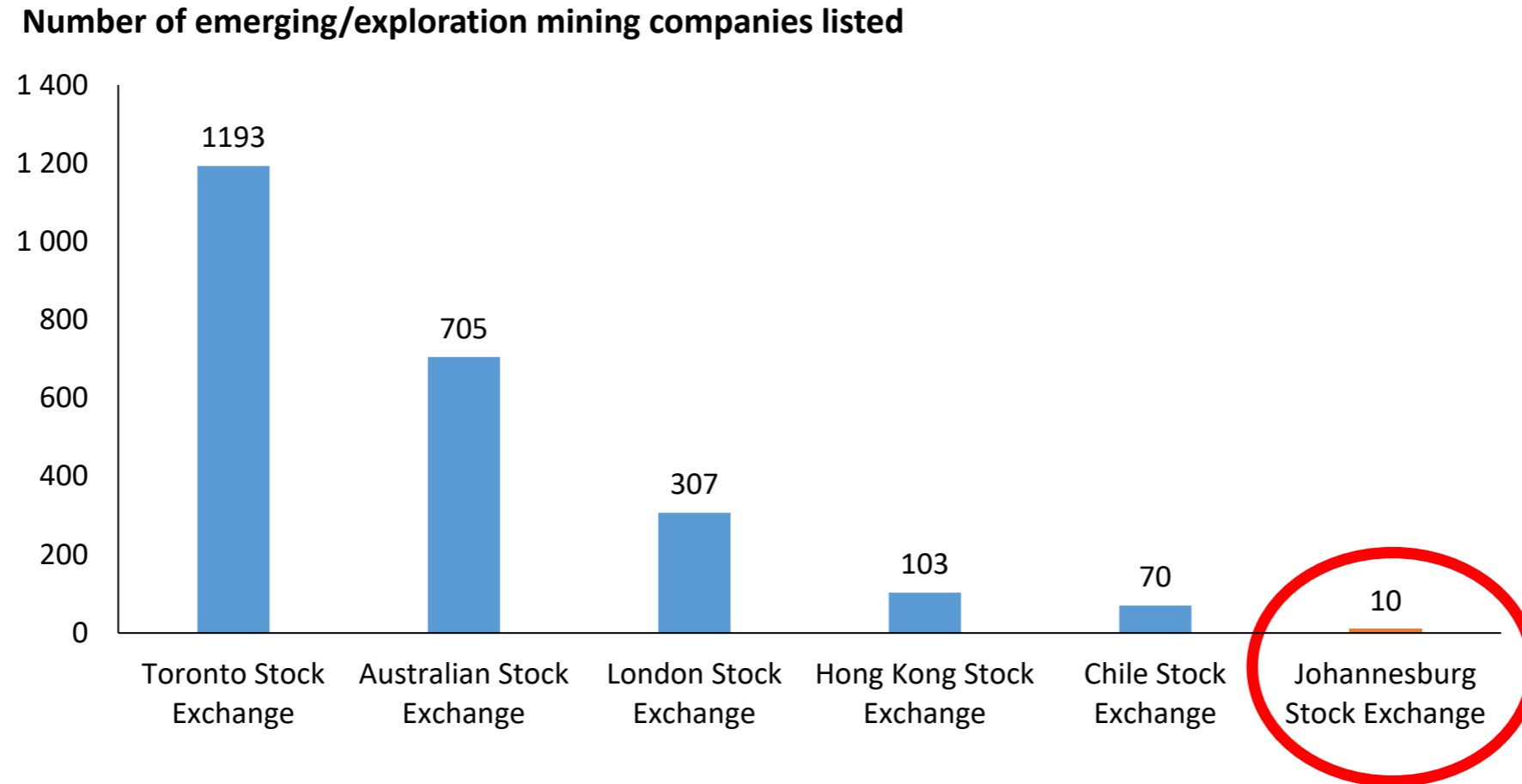
Source: Boston Consulting Group

# Approval process for mining rights in SA



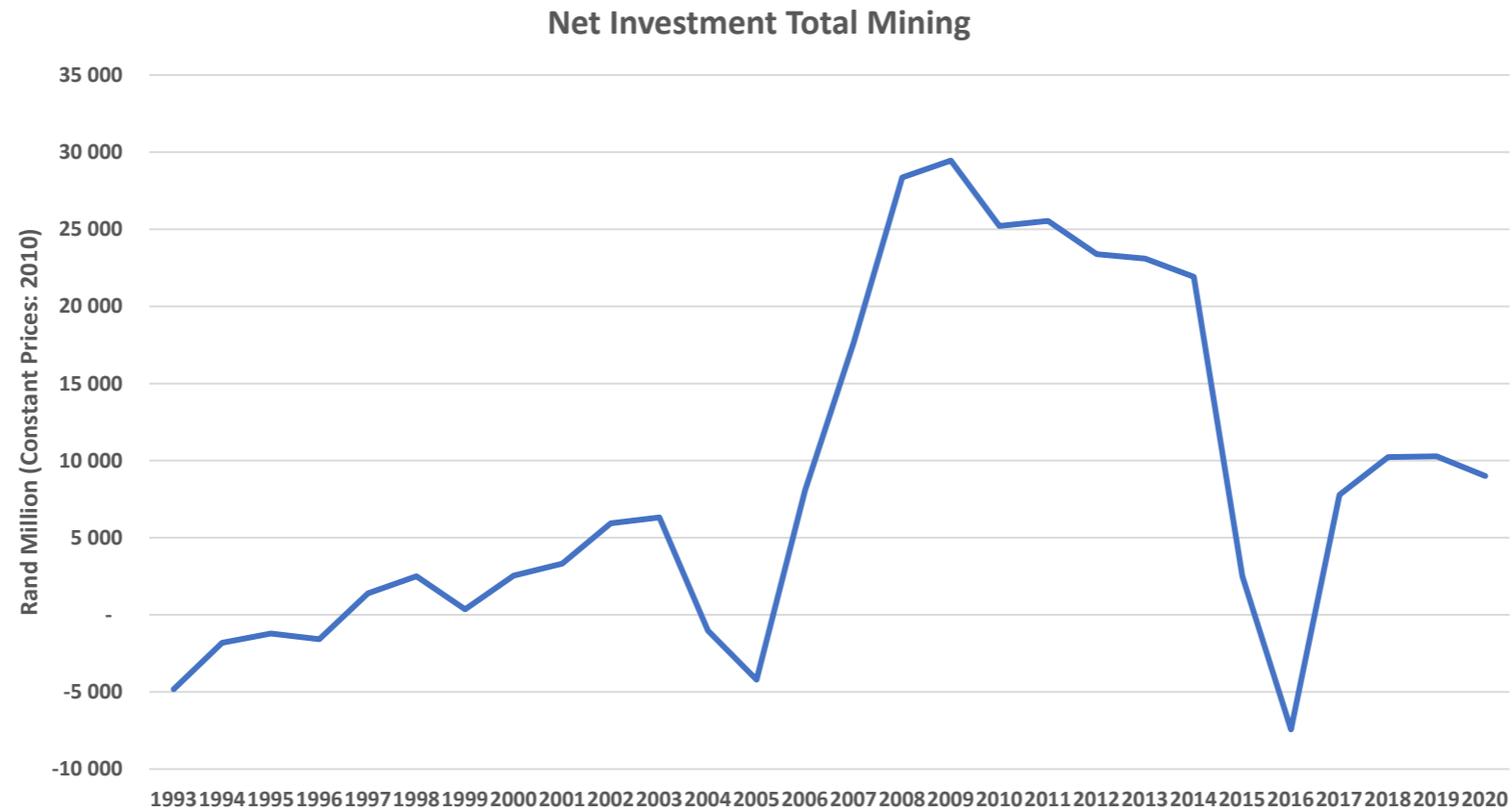


# Listed emerging/exploration mining companies

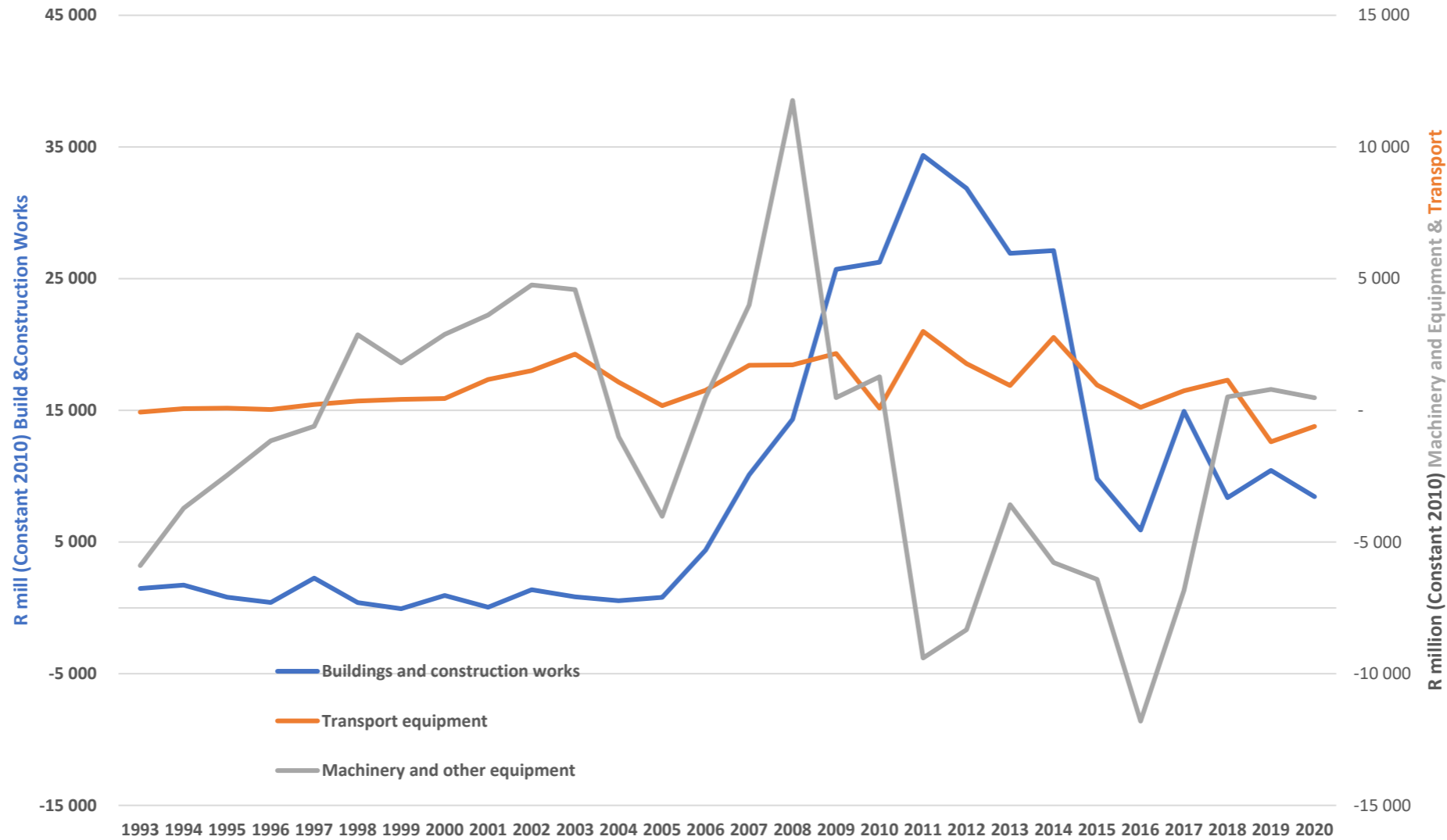


# Construction of Mines

# Net Investment: Total



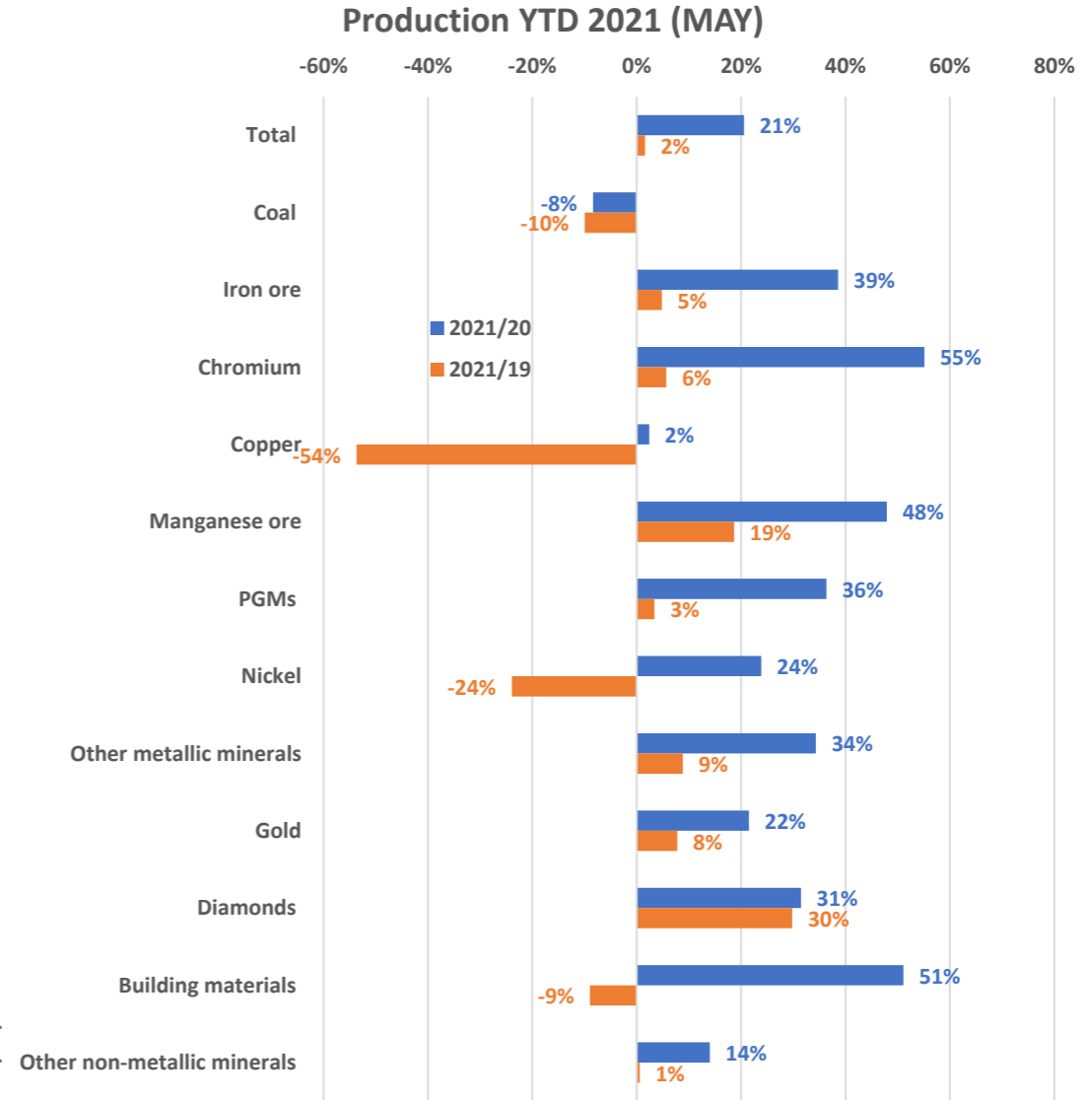
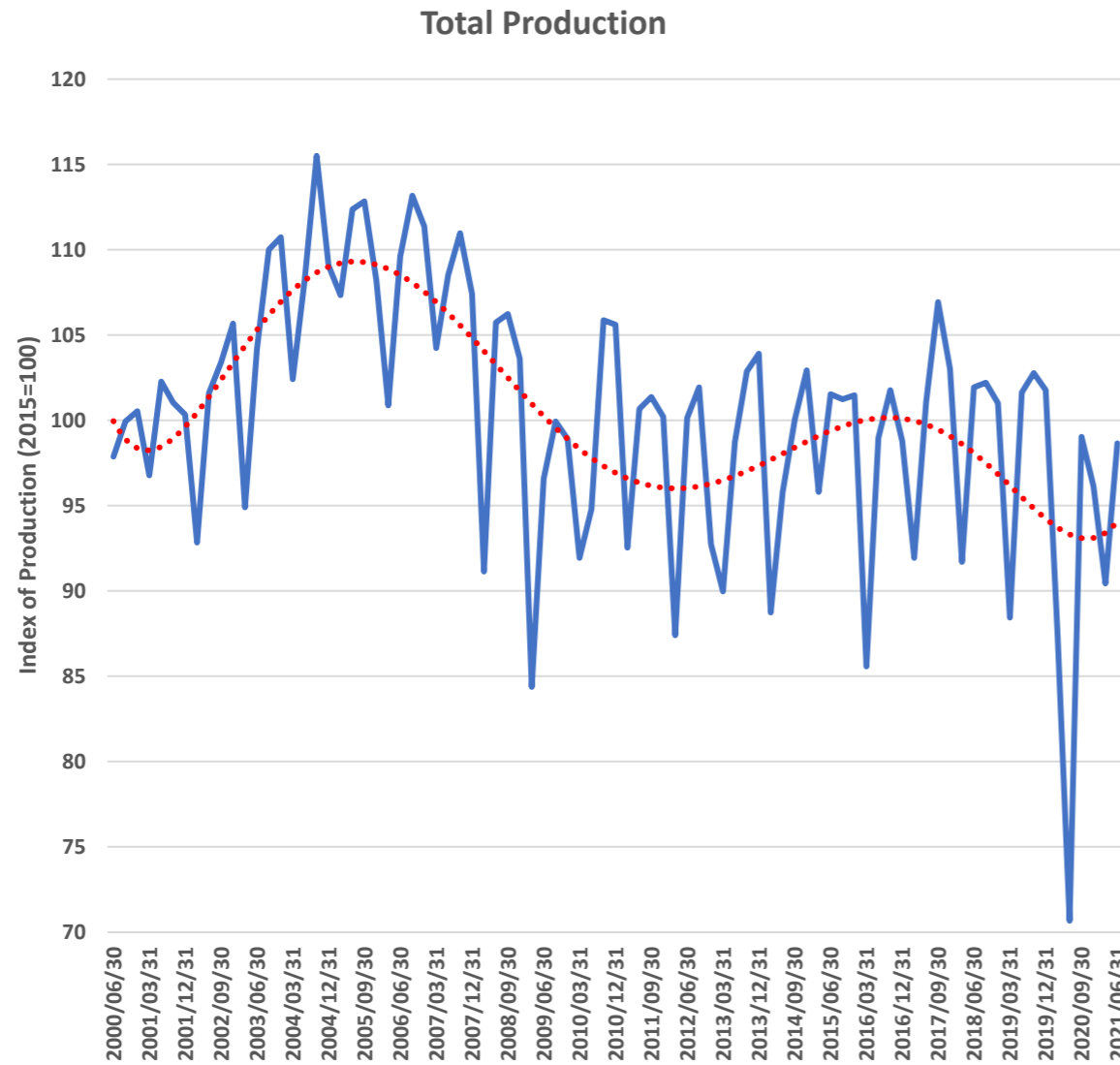
# Net Investment Disaggregated



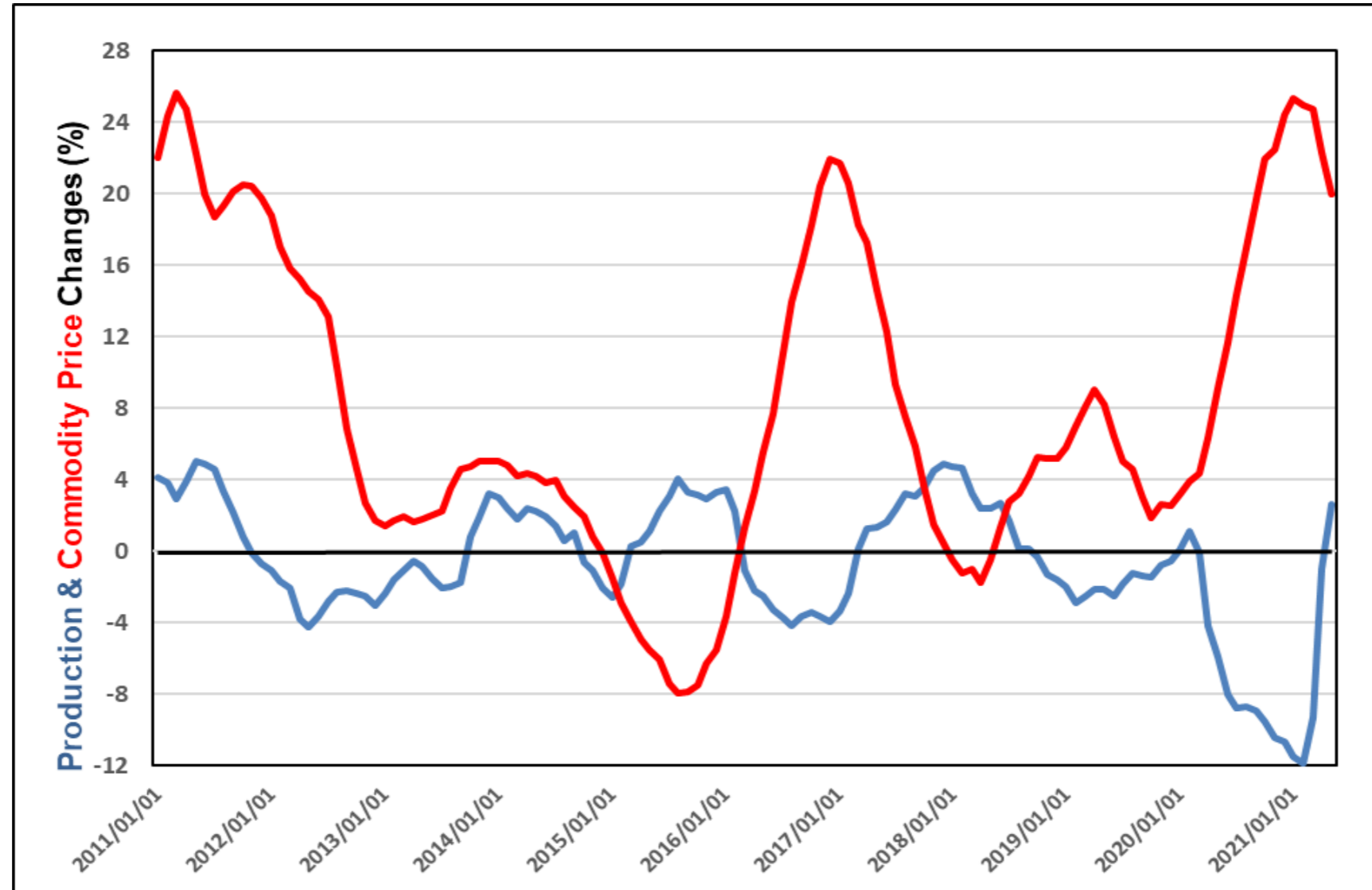
# Mining Production



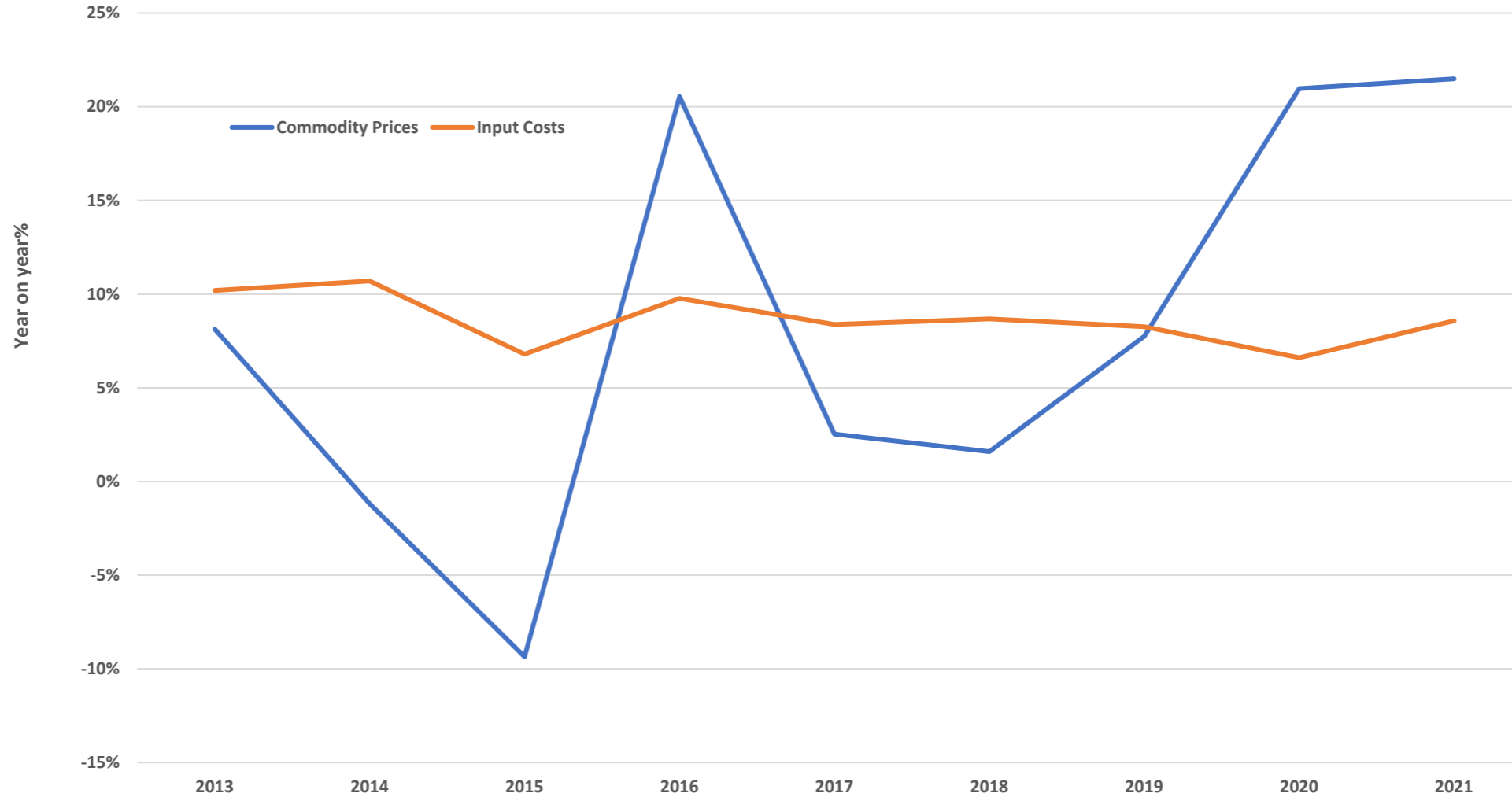
# Mining Production









# Production vs Commodity prices



# Commodity Prices and Input Cost Inflation



# Mining depends directly and indirectly on all government supplied infrastructure; R 100 bill, 45% of Intermediary Input Costs & R 35 bill of Wage bill

WATER	ELECTRICITY	HARBOURS	RAIL	ROAD	HOUSING
R 11.9 bill, 4% of Inputs costs	R 30.8 bill, 10% of Input costs	Transport & Storage: R 75.2 bill; 23% of Input costs			R 33.5 bill, 22% of Wages
					
<b>Water Boards, Local Authorities</b>	<b>Eskom, Local Authorities</b>	<b>Portnet</b>	<b>Transnet Freight Rail</b>	<b>Hauliers</b>	<b>Provincial &amp; Local Authorities</b>
<p>Water a constraint</p> <p>Waterboards struggle to provide</p> <p>Tussle between Water Boards &amp; Local Authorities over water income</p> <p>Mines have surplus water for communities</p> <p>Water pollution: mining has solutions</p>	<p>Mines buy 30% of Eskom power</p> <p>Electricity a constraint and rising tariffs have massive cost implications (2007 levels)</p> <p>Beneficiation unviable</p>	<p>Harbour costs high ito world benchmarks</p> <p>Potential with capacity extensions; Saldanha PE Durban Richards Bay Maputo</p> <p>Oceans Phakisa drive to build SA flagged shipping on back of mining volumes</p>	<p>Bottlenecks on Bulk lines</p> <p>Lack of Customer orientation</p> <p>High Costs</p>	<p>Last resort for export logistics</p> <p>Coal links to power stations</p> <p>Damage to roads due to rail unavailability</p>	<p>Mines perform their duties.</p> <p>Influx of people to mines cause stress</p> <p>Local authority capacity weak; mining towns 3 times more likely to have financial irregularities</p> <p>Joint solutions needed through cooperation amongst all stakeholders</p>

# Refining and Beneficiation

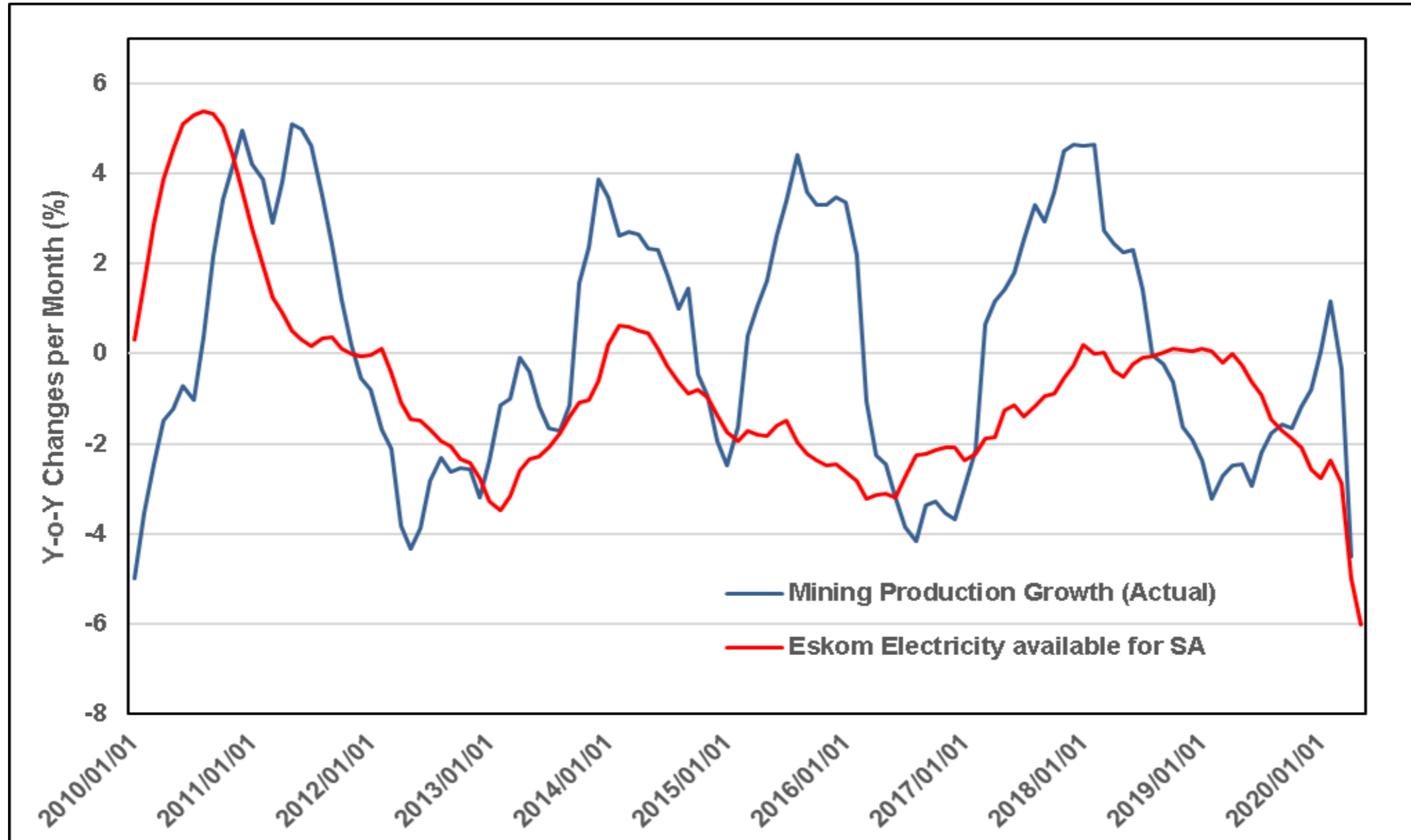
# Downstream Beneficiation; + R 500 billion and > 200 000 job opportunities (1)

Mineral	Mine Production, Sales and Employment	Local Sales	Local Beneficiation
<b>PGM's</b>	<ul style="list-style-type: none"> <li>• Production = 270 tons</li> <li>• Total sales = R 105 billion</li> <li>• Employment = 166 367</li> </ul>	24 tons valued at R10.6 billion	<ul style="list-style-type: none"> <li>• <b>Catalytic converters</b>; SA produced and exported 9.03 million units (40% capacity utilization), earning R18.9 billion in export earnings.</li> <li>• <b>Other forms of local beneficiation</b>; e.g. chemical, glass, petroleum &amp; electronics consume/beneficiate 22% of local PGM output, R2.4 billion.</li> <li>• <b>Jewelry</b>; very little</li> </ul>
<b>Coal</b>	<ul style="list-style-type: none"> <li>• Production = 253 Mt</li> <li>• Total sales = R139 billion</li> <li>• Employment = 89 433</li> </ul>	179 Mt local sales valued at R72.9 billion; 98 Mt to Eskom, 39 Mt Sasol	<ul style="list-style-type: none"> <li>• Final product – 212 190 GWh of <b>electricity</b> (85% of SA's electricity supply), value created R177.4 billion, 48 628 jobs (in Eskom).</li> <li>• <b>Synfuels</b> 38.8 Mt valued at R55.8 billion, Gas sales 17.3 billion standard cubic feet, Polymers 1 246 Kt at R16.7 billion, Solvents 729 Kt at R9.7 billion, Explosives 247 Kt at R3.3 billion, Other (waxes, fertilizers, etc) R13 billion,</li> <li>• 31 270 jobs, R181.4 billion in sales</li> </ul>
<b>Gold</b>	<ul style="list-style-type: none"> <li>• Production = 117 tons</li> <li>• Sales = R 69.6 billion</li> <li>• Employment = 94 152</li> </ul>	66.3 tons valued at R 35 billion	<ul style="list-style-type: none"> <li>• <b>Investment; Coins</b> produced (Krugersands) – 49 tons = R26 billion (73% of locally purchased gold), <b>Central bank</b> purchases (coin and gold bar) – 0.3 tons = R159 million</li> <li>• Other manufacturing (including jewelry) = R9.1 billion</li> </ul>
<b>Iron ore</b>	<ul style="list-style-type: none"> <li>• Production = 74.3 Mt</li> <li>• Total sales = R51.2 billion</li> <li>• Employment = 18 614</li> </ul>	8 Mt sold locally valued at R5.7 billion	<ul style="list-style-type: none"> <li>• 6.1 Mt of <b>local steel production</b> (4 Mt flats &amp; 2.1 Mt long products). 4.4 Mt local sales &amp; 1.4 Mt exported with total revenue of R45.5 billion and 171 000 jobs in the steel making and fabrication industries.</li> </ul>
<b>Diamonds</b>	<ul style="list-style-type: none"> <li>• Production = 9.91 million carats</li> <li>• Total sales = R 17.3 billion</li> <li>• Employment = 16 264</li> </ul>	1.4 million carats valued at R 7.2 billion	<ul style="list-style-type: none"> <li>• Locally cut diamonds that are exported = R9.7 billion, 419 939 carats</li> </ul>

# Downstream Beneficiation; + R 500 billion and > 200 000 job opportunities (2)

Mineral	Mine Production, Sales and Employment	Local Sales	Local Beneficiation
<b>Nickel</b>	<ul style="list-style-type: none"> <li>Production = 43.2 Kt</li> <li>Total sales = R6.7 billion</li> </ul>	7.2 Kt valued at R1.2 billion.	<ul style="list-style-type: none"> <li><b>Stainless steel</b> production</li> </ul>
<b>Copper</b>	<ul style="list-style-type: none"> <li>Production = 46 900 tons</li> <li>Total sales = R 4 billion</li> <li>Employment = 4493</li> </ul>	23 054 tons valued at R2.02 billion	<ul style="list-style-type: none"> <li>Local production of <b>copper for the energy sector</b>, 11 499 tons per annum. R9.3 billion in sales</li> <li>Non-ferrous metal products produced = R251 million</li> <li>Non-metallic mineral products and other manufacturing groups = R418 million</li> </ul>
<b>Manganese</b>	<ul style="list-style-type: none"> <li>Production = 14.9 Mt</li> <li>Total sales = R44.8 billion</li> <li>Employment = 9 333</li> </ul>	~368 t local sales valued at R1.1 billion	<b>Manganese alloys-</b> <ul style="list-style-type: none"> <li>1.2 Mt produced with a total sales value R16.7 billion.</li> <li>Local sales of Manganese ore for local beneficiation amounted to 368 000 ton valued at R 2,5 billion</li> </ul>
<b>Industrial minerals</b>	<ul style="list-style-type: none"> <li>Total Sales = R 17,9 billion</li> <li>Employment = 12 562</li> </ul>	<ul style="list-style-type: none"> <li>R 14.3 billion</li> </ul>	<ul style="list-style-type: none"> <li><b>Cement industry</b>, 14.5 million tons of local production of cement +/- R20 billion industry.</li> <li><b>Clay brick production</b> = 3.5 billion bricks per year, providing 20 000 direct jobs and 160 000 allied services.</li> </ul>
<b>Chrome</b>	<ul style="list-style-type: none"> <li>Production = 17.9 Mt</li> <li>Total sales = R21.8 billion</li> <li>Employment = 18 923</li> </ul>	9.9 Mt local sales valued at R11.8 billion	Chrome alloys; <ul style="list-style-type: none"> <li>3.5mt produced, 0.4mt sold locally, 3.1 mt exported, total sales R17.5 billion</li> </ul> Chemicals and refractories
<b>Total</b>	<b>About R 434 billion and 431 000 mining sector jobs</b>	<b>R162 billion domestically sold</b>	<b>R501 billion of value created domestically and &gt;200 000 jobs are created in the downstream beneficiation industries</b>

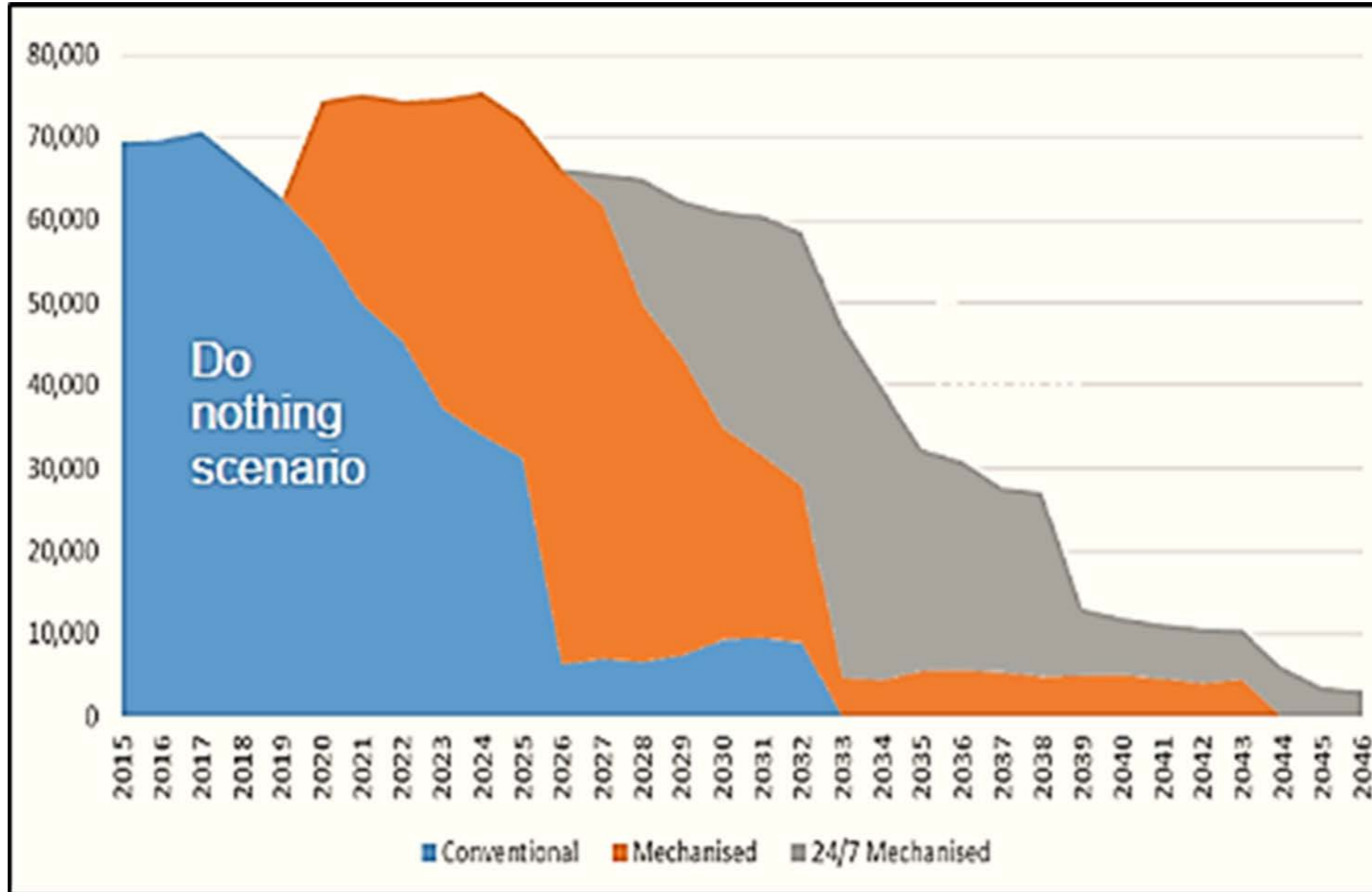
# VARIATION IN MINING PRODUCTION & ELECTRICITY AVAILABILITY FACTOR





# Mine Closure

# The Longer-Term Reality for Mining (gold)



# Most Relevant Legislation re Mine Closures

General	Environmental	Land Use Management	Stakeholder Involvement
Mineral and Petroleum Resources Development Act 28 of 2002	National Environmental Management Act 107 of 1998	Spatial Planning and Land Use Management Act 16 of 2013	Interim Protection of Informal Land Act 31 of 1996
National Planning Commission <i>National Development Plan 2030: Our Future - Make It Work</i> (2011)	National Water Act 36 of 1998	Local Government: Municipal Systems Act 19 of 2008	Department of Mineral Resources <i>Revised Social and Labour Plan Guideline</i> (10-2010)
United Nations General Assembly <i>Sustainable Development Goals</i> (2015)	National Environmental Management: Waste Act 59 of 2008	Various provincial legislation addressing spatial planning and land use management, for example, the Western Cape Land Use Planning Act 3 of 2014; Land Use Planning Ordinance 15 of 1985; Townships Ordinance 9 of 1969; Town-Planning and Townships Ordinance 15 of 1986	Department of Mineral Resources <i>Guideline for Consultation with Communities and Interested and Affected Parties – As Required in terms of Section 10(1)(b), 16(4)(b), 22(4)(b), 27(5)(b) and 39 of the MPRDA</i>
	National Environmental Management: Biodiversity Act 10 of 2004	Municipal Bylaws addressing municipal planning, spatial planning and land use management	Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry, 2018 (GN 1002 in GG 41934 of 27-09-2018)
	National Environmental Management: Air Quality Act 39 of 2004		

# Outlook – Short to Medium Term

Commodity	Endowment	Demand Constraints	Cost Competitiveness	Infrastructure	Commodity Price	Overall Score	
Manganese Ore	0	0	0	0,75	0,5	0,25	High Potential
Chrome Ore	0	0	0	0,75	0,5	0,25	
PGM	0	0	0,5	0,75	0,25	0,30	
Aggregates & Sands	0	0,75	0,25	0,5	0,25	0,35	
Iron Ore	1	0	0,25	0,5	0,25	0,40	
Gold	0	0	1	0,75	0,25	0,40	
Coal	0	0,75	0,25	0,75	0,5	0,45	
Diamonds	0,5	0,75	0,25	0,25	1	0,55	Lower Potential
<i>Source: Minerals Council South Africa</i>							
<i>Legend: 0 = Limited Constraint to Growth, 1= Significant Constraint to Growth</i>							

# Thank you

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