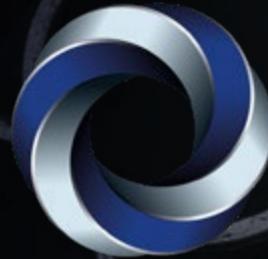


steel Matters



A SOUTH AFRICAN STEEL INDUSTRY REPORT

*Reflecting on 2021 and
an outlook for 2022.*



South African
Iron and Steel Institute

SAISI.ORG

Introduction

Finance Minister Enoch Godongwana says manufacturing and industrialisation remain key to stimulating South Africa's economy. The South African steel industry plays a critical role in achieving the very expansion the Minister is talking about.

The historical trend of domestic steel consumption supports the development of the country's infrastructure programme, and the industry has the potential and the ability to maintain that crucial position in the reindustrialisation effort in South Africa.

It is of the utmost importance for the South African Iron and Steel Institute (SAISI) to focus on the sustainability of the steel industry, covering all questions around social sustainability, environmental sustainability, and economic sustainability.

We promote steel to all our stakeholders, the steel user communities, policymakers, financial institutions, and the media. SAIISI's task is to position steel in society as the enabler of our well-being and the growth of our country. We make the case why steel is essential and find solutions to steel challenges. These solutions deal with those critical megatrends in market accessibility and fair trade.

The longer-term challenges for the steel industry vest in improving steel's efficiency in application. The tendency toward lighter and stronger steel with technological improvement will cause slower demand growth over the long term. The industry will have to deal with this sustainably.

New challenges on the technological front, such as digitalisation and circular economic systems focusing on the re-use of certain materials, will have to be absorbed by the industry to keep abreast of our continuously changing environment.

South African steel's versatility is suitable for a wide range of applications. Steel is critical because no other material has the same unique strength, formability, and versatility. In addition, new generations of steel continue to be developed, making it possible for manufacturers and builders to implement durable, lightweight designs.



In the future, materials that are ever stronger and meet higher environmental standards will support development in South Africa.

One further fundamental challenge is for steel to prove to society that it is an environmentally competitive material. To achieve this, steelmakers will have to solve the issue of carbon emissions as part of steel production.

Society depends on steel. Humankind's future success in meeting climate change, poverty, population growth, water distribution and energy needs, in the context of a lower carbon world, depends on steel applications.

Primary steel sales to industrial groups in South Africa



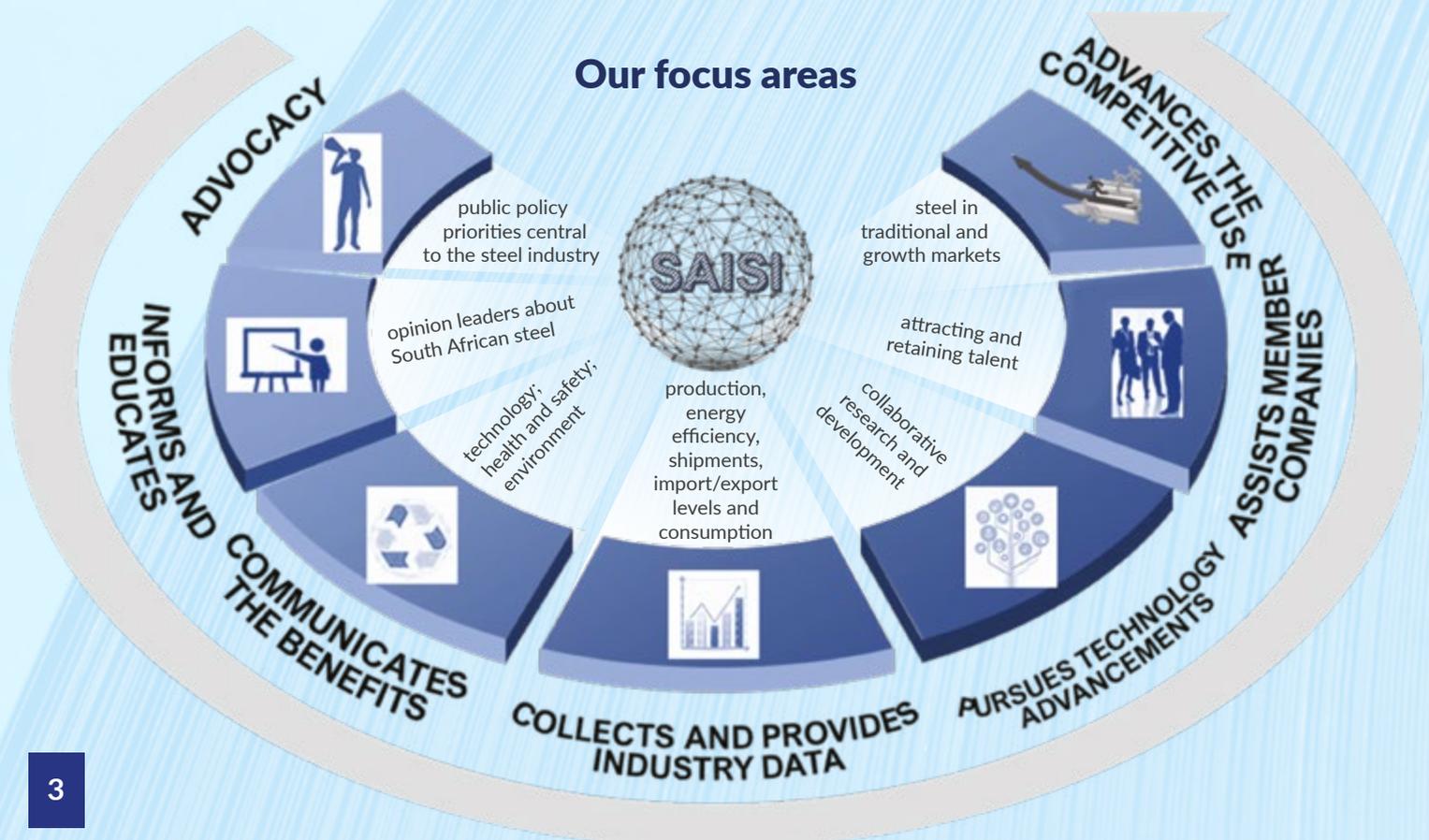
About SAISI

The South African Iron and Steel Institute (SAISI) is a non-profit organisation.

SAISI is an industry representative association for 96% of all steel produced in South Africa. We have embarked on a campaign to enhance the image and public visibility of the industry.

Additionally, SAISI represents affiliated members from the steel re-rolling and foundries industries.

SAISI is an organisation for its members and is driven by its members. Our activities operate through a working group structure, where members can participate and contribute to the outcome of SAISI's activities. With the support of our stakeholders, we continue to turn challenges into opportunities.





Why **Steel Matters**

The pressures of rapid urbanisation in South Africa provide a golden opportunity to spur significant economic growth, led by the country's steel industry. More than half of the steel produced worldwide goes into buildings and associated infrastructure, including housing, hospitals, schools, water reticulation, sewage systems, roads, bridges, ports, railways, and airports.

Department of Trade, Industry and Competition statistics show that South Africa's downstream value-add steel industry directly employs about 200 000 workers. But its biggest customers – the mining, construction, and automotive industries -- employ eight million South Africans overall, contributing R600 billion to the economy annually, or about 15% of the country's GDP.

Steel is also related to the production, distribution, and storage of energy, from whatever source, and it is crucial for food production. Importantly, steel products are increasingly energy-efficient and recyclable, in line with South Africa's development plans to provide a better future for all.

There is no doubt that the steel industry plays a significant role in the future growth and development of the South African economy, and it is for this reason that the South African Steel and Metal Fabrication Master Plan (the Steel Master Plan) focuses on real actions to stabilise, consolidate, rebuild and grow the entire steel value chain.

Collective commitment by government and the private sector to a balanced package of measures is needed to change the direction of the industry.



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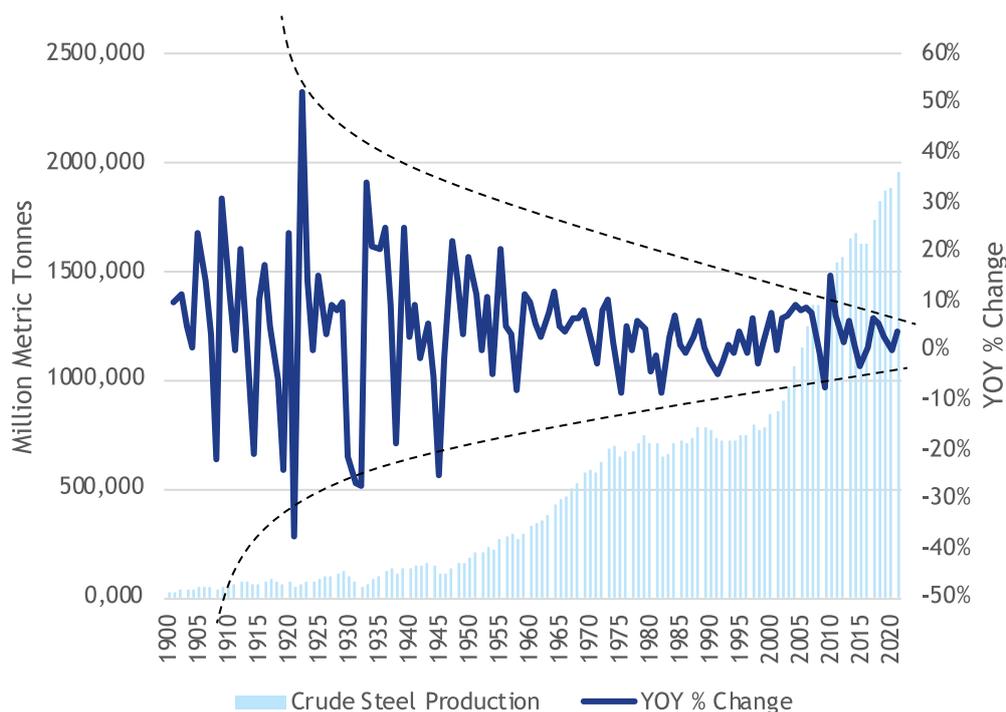
Connecting the Dots

World-wide crude steel production

The global steel industry is cyclical. More than half of global crude steel production comes from Asia, mainly China. Together, the US, Europe and Japan now represent less than 20% of global production. South Africa represented 0.8% of global steel production at its peak in 2006, but that level is below 0.2% today.

However, since 2000, raw steel production has more than doubled across the world - again mainly driven by China. Notwithstanding this rapid growth, volatility of steel output has become far more stable compared with the pre-WWII era, and even with the recent impact of the Covid pandemic, world crude steel production continued to grow 4% year-on-year in 2021, again driven mainly by developments in China.

World crude steel production





Events affecting South African steelmaking

In 2021, recovery from the pandemic shock turned out to be stronger than expected in many regions, despite continuing supply chain issues and Covid-19 waves, mostly underpinned by the pent up demand from the previous year. However, a sharper than anticipated deceleration in China led to lower global steel demand growth in 2021, with growing uncertainty for the future.

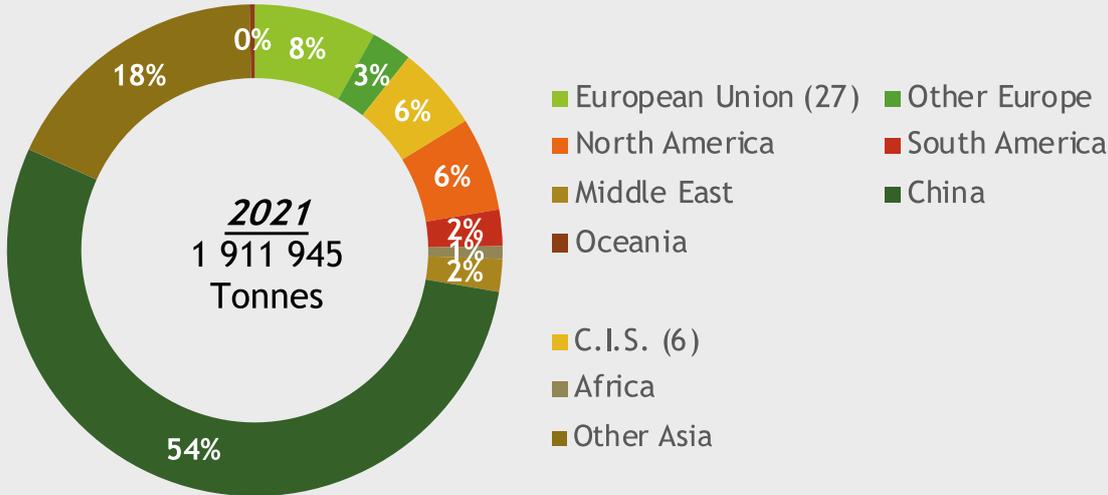
Unfortunately, the expectation of a continued and stable recovery from the pandemic has been shaken by the war in Ukraine and rising inflation. The magnitude of the impact of this conflict will vary across regions, depending on their direct trade and financial exposure to Russia and the Ukraine.

The impact will be felt globally through higher energy and commodity prices – especially raw materials for steel production – and continued supply chain disruptions, which were troubling the global steel industry even before the war.

Further, financial market volatility and heightened uncertainty will undermine investment.

Such global spillovers from the war in Ukraine, along with low growth in China, point to reduced growth expectations for global steel demand in 2022.

Global crude steel production breakdown





The production of steel matters in South Africa. It remains a major contributor to the South African economy and its value-add to the country's GDP remains above 5%. Despite the country producing much less than 1% of global crude steel output, in 2020 South Africa still ranked 35th in the world as a crude steel producer and is currently the third largest producer in Africa.

Traditionally, overall construction activities in South Africa account for about 50% of all steel used (including for cabling, tubing, piping, fasteners, fixtures, and fittings), although the figure is much lower now, after years of underspending by government on large infrastructure maintenance and development since the end of the FIFA Soccer World Cup in 2010.

This reduction has been exacerbated by the effects of the 2009 global financial crisis, the Covid pandemic and many years of generally low gross fixed capital formation inputs by private and state actors in South Africa.

Meanwhile, Evraz Highveld Steel and Vanadium, once South Africa's second largest primary steel producer, went into business rescue in 2015, while the country's largest primary steel producer ArcelorMittal South Africa's Saldanha Steel export mill was put into care and maintenance in 2019. This took out a total of about two-million tonnes of domestic steel production a year.



Connecting the Dots

Steel's wide range of applications and its backward and forward linkages makes it one of the most complex value chains in the South African economy.

Steel sector's value chain

Harvest	Distribute		Convert	Distribute		Process	Consume/Use
Raw Materials	Energy	Logistics	Crude Steel & Semis	Primary Steel Products	Secondary Steel Products	Fabricated Steel Products	End Customer
<ul style="list-style-type: none"> • Ferrous Scrap • Iron Ore • Alloys • Limestone 	<ul style="list-style-type: none"> • LNG • Coking Coal • Electricity (ESKOM) 	<ul style="list-style-type: none"> • Road Trucks • Rail (Transnet) • Port Operations (Transnet) 	<ul style="list-style-type: none"> • Slabs for Flat Steel • Billets & Blooms for Long Steel • Steel Casings 	<ul style="list-style-type: none"> • Plate • Hot-rolled Coil • Hot-rolled Sections • Bars & Rods 	<ul style="list-style-type: none"> • Cold-rolled Coil • Coated Steel • Plated Steel • Seamless Pipe 	<ul style="list-style-type: none"> • Automotive Parts • Pipe & Tube • Structures & Buildings • Packaging 	<ul style="list-style-type: none"> • Auto OEMs • Agriculture • Mining • SOEs — Energy & Water • Construction

Along with construction, the metal is widely used in the mining, automotive, energy, packaging, and transport sectors of the South African economy. These sectors include many well-known companies listed on the Johannesburg Stock Exchange, such as global miner Anglo American, packaging groups Mpact and Nampak, and until recently Imperial Logistics (which has just been delisted after being sold to Dubai-based DP World, a global cargo, logistics, port terminal operations, maritime services, and free trade zones operator).

Steel also underpins the activities of many of the world's major vehicle makers in South Africa, including Volkswagen, BMW, Mercedes-Benz,

Toyota, Ford, and many listed and unlisted companies that provide services to state-owned entities such as national electricity supplier Eskom and the fast-developing green energy markets in SA.

Four new mini-mills have been commissioned in South Africa since 2013 with a combined capacity of about 500,000 tonnes, giving South Africa about 8.5 million tonnes of primary steel production capacity. However, South African steel capacity utilisation rates were only about 79% in 2021, with the Covid pandemic affecting supply and demand.

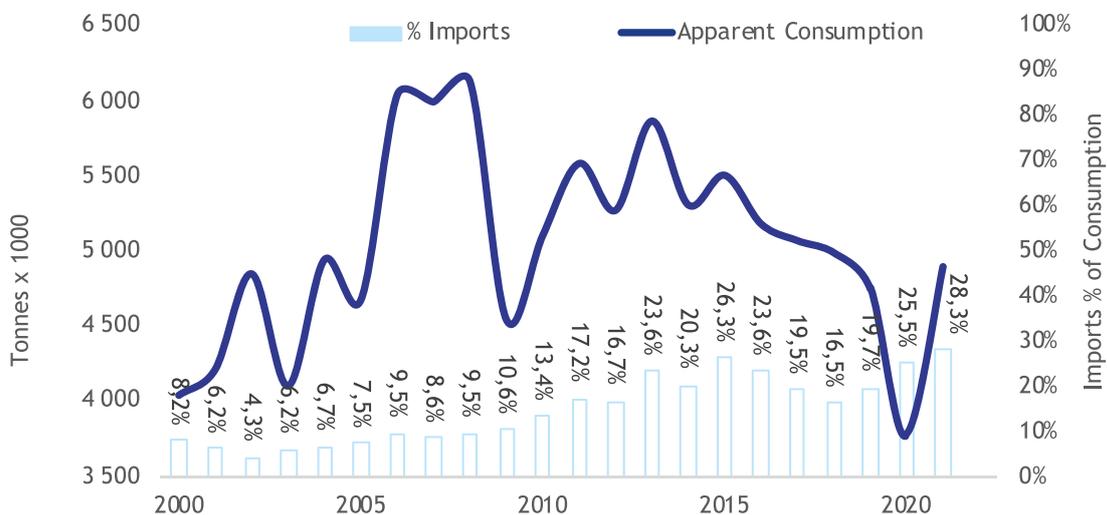
Steel manufacturing capacity in South Africa

Geography of Steel Production in SA



South Africa is now consuming about five million tonnes of finished steel products a year. Up until 2005, South Africa exported about half of its primary steel production, but since then exports have steadily declined to 17% of total sales in 2021. There is now little room to cater for local steel demand spikes relative to production capacity. This puts more emphasis on steel demand planning.

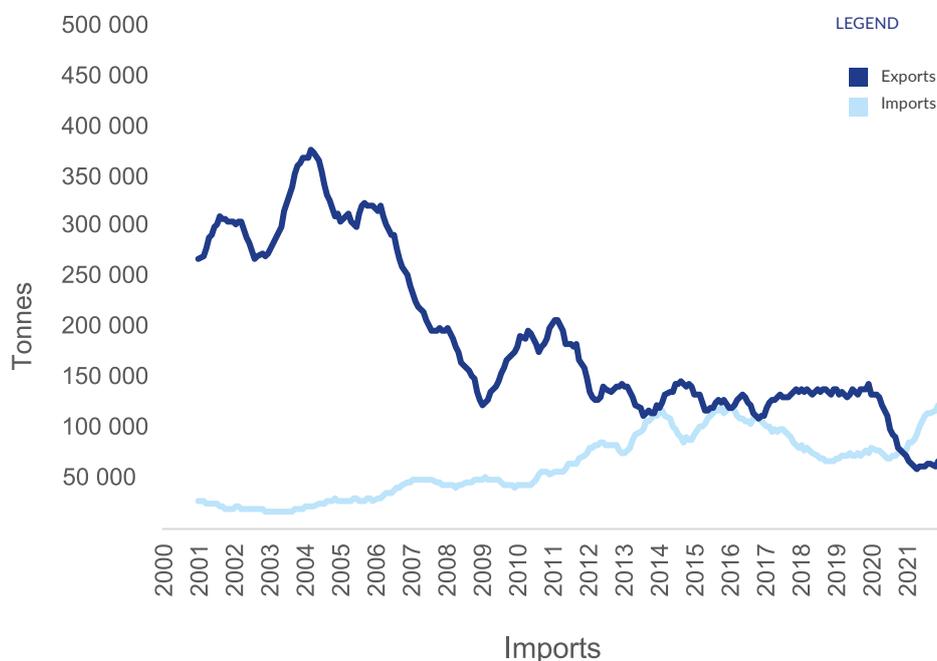
SA apparent steel consumption (Carbon & Stainless)



Connecting the Dots

South Africa also imported 31% of its primary steel demand in 2021, having become a net importer of steel since the beginning of 2020.

Monthly imports and exports of primary steel



South African apparent steel consumption is substantially propped-up by 31% imported primary steel products

Steel use is still highly impacted by inflation and market uncertainty prevailing from the Covid-inflicted lockdown period. However, notwithstanding all the market uncertainty and the inflationary pressures, the South African apparent steel use post lockdown was even better than expected at 5.1 million tonnes, an astonishing 36% recovery from the previous year.

Even more surprising though was the record imported volumes at close to 1.7 million tonnes, constituting approximately a third of all steel used in South Africa and factoring in the much-contested trade measures introduced to curb the influx of foreign steel to the country.



The possible reasons for the large volume of imported steel varies from price to availability. However, the former seems less important since local steel prices seem to be comparable to the lower end of international price offerings.

The conclusion could then only be the availability of steel. However, one would think the market would have sorted out the steel supply shortages experienced during late 2020 and early 2021, following the Covid lockdowns, which leaves the latest number in question.

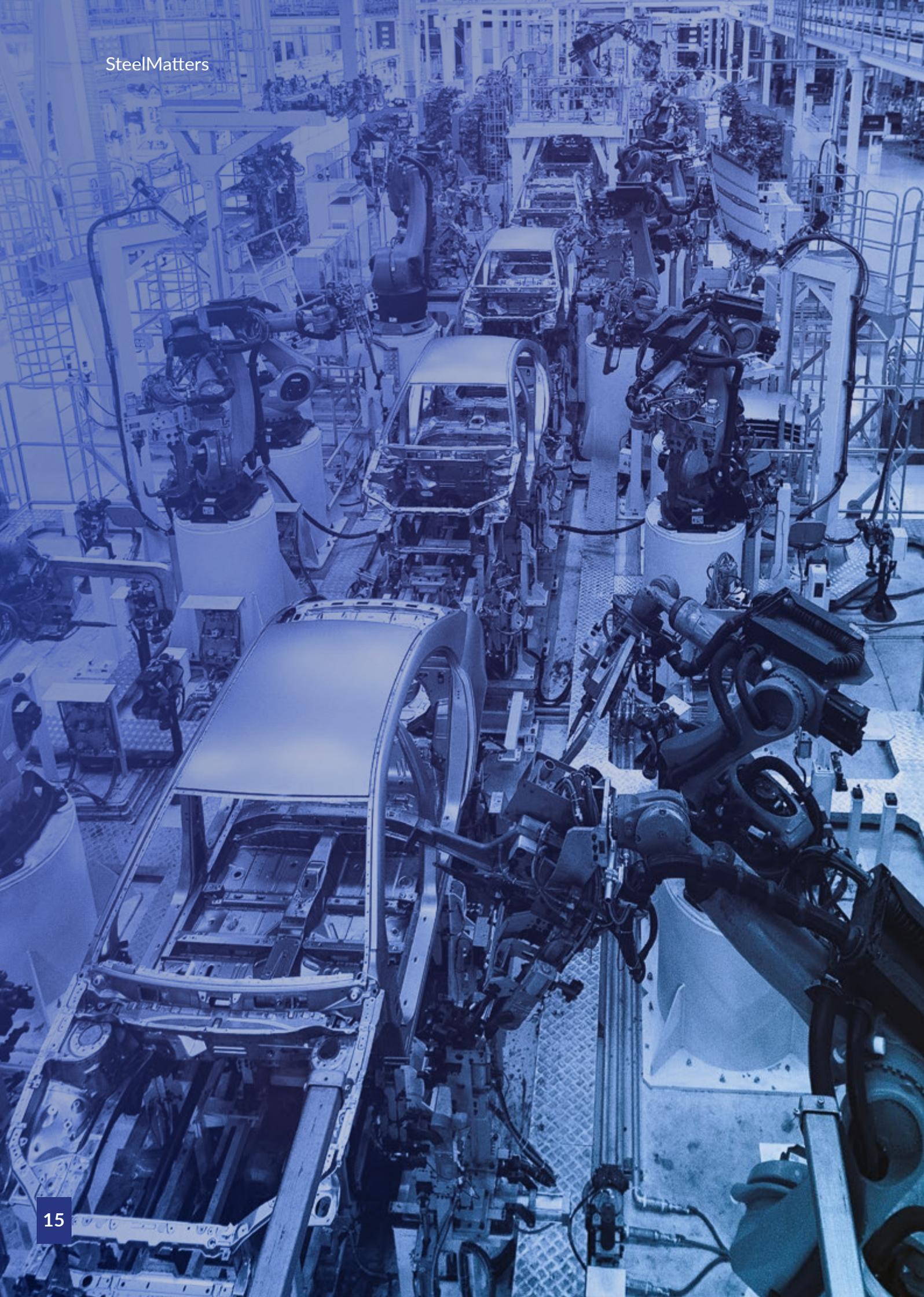
Given the country's long-term growth in apparent steel use of less than 1% per annum and the available steelmaking capability that far outstrips demand, the loss of a third of the country's steel use to foreign steel mills is a far less palatable proposition. The situation emphasises the need for a deeper understanding of the factors influencing procurement decision and to plug unnecessary demand leakages due to illicit activities in the trade.

Although we need to overhaul our tracking of inventory levels, we have assessed that a substantial volume of the 1.7 million tonnes imported went towards the replenishment of the depleted inventory. Therefore, the expected steel use in the country for 2022 will be lower than last year at just over 5 million tonnes, a drop of approximately 1.5%.

Our contraction in steel usage for 2022 will be contrary to the Worldsteel Global outlook, where continued market demand growth is expected, even with substantial steel volumes lost in the CIS offering. The impact of the Russian/ Ukraine situation, which initially caused a hiccup in world steel markets, is likely to be short-lived as most products are finding new markets in non-sanctioned countries, which is also demonstrated in the downturn of the steel price cycle.

Total South African crude steel production capacity is about 8.5 million tonnes per year, but the effective rate is closer to 6.5 million tonnes. The anchor producer is ArcelorMittal South Africa, the local unit of global steelmaker ArcelorMittal Group based in Luxembourg.

After years of heavy losses punctuated by short-term gains, the primary steel industry posted in 2021 its strongest recovery since 2008, which was underpinned by the strong financial results published by ArcelorMittal South Africa for the year ending 31 December 2021.





Value-added with tailored approach to steel-facilitated activity

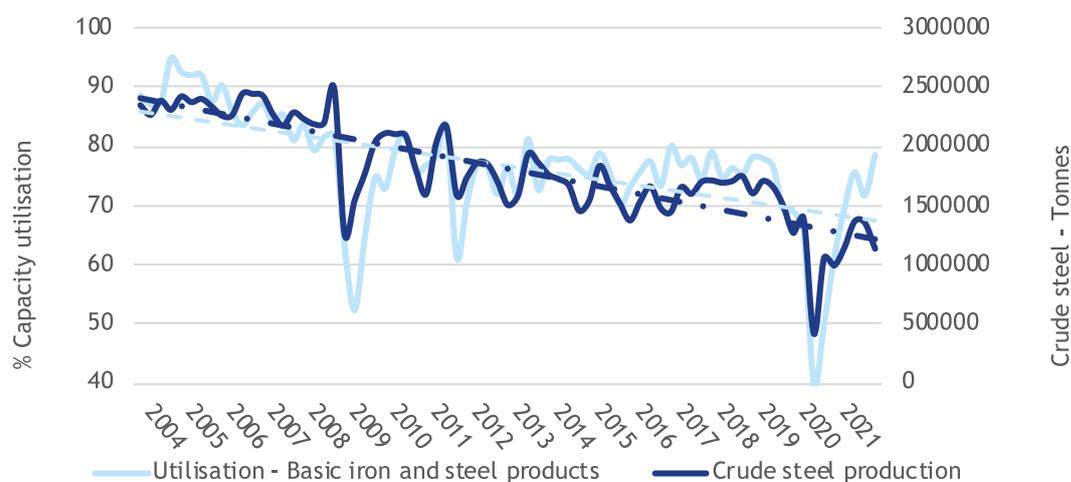
R- million

	Supply chain	Steel mfg & fabrication	Customer sectors	Total value add
Value add	65 198	53 237	149 176	267 610
Taxes less subsidies	3 993	940	3 062	7 995
Total	69 191	54 177	152 238	275 606
GDP	5 357 640	5 357 640	5 357 640	5 357 640
% Value added to GDP	1.3%	1.0%	2.8%	5.1%

Source: Stats SA & Tailored Approach

South African crude steel production vs capacity utilisation for basic iron and steel products

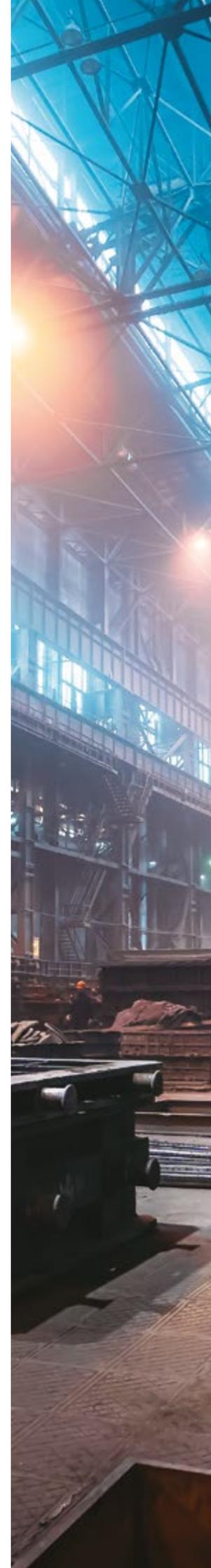
Utilisation rates give a better indication of directionality in the local steel industry as there is no consensus on “capacity”. In high demand times, furnaces have been run harder; in low demand times, worker shifts have been dropped or equipment “hot idled.” Utilisation targets are used by some countries to set thresholds for trade interventions such as tariffs. (e.g., EU, US, South Korea, and Japan)



South African Exposure to Steel Markets

The magnitude of the apparent steel consumption (ASC) in construction, which includes all intermediary products such as pipe and tube, wire, fasteners, etc., is an indication of the level of value-add through the steel value chain.

It is also the reason South Africa's ASC is so dependent on infrastructure spend.





Total ASC distribution to industrial groups (5.1 mmt)



Distribution of the imported portion (1.6 mmt)



The African Scenario

Positive growth stories for Africa could be eclipsed by the potential impact of the conflict in Ukraine.

Some African countries, particularly those in North Africa, are highly dependent on cereal imports from Russia and Ukraine.

To this end, trade shocks resulting from higher commodity prices will benefit grain growing countries like South Africa, Namibia, Mozambique, and Zimbabwe.

African oil producers stand to benefit from higher oil prices as their fiscal positions are closely correlated to oil exports and the international oil price. Production shortfalls, though, will likely dampen this tailwind, with many producers still unable to reach production targets. Higher energy costs, in turn, will stoke inflationary pressure, and those with fuel subsidies will find it harder to scrap them in the near-term.

Apparent steel use in Africa totaled 37.4 million tonnes in 2021, of which 19.9 million tonnes were imported and 93% of this from outside the continent.



However, the majority of the imports for Africa consist of final steel products, assessed to be double the steel consumption volume.

Africa Continental Free Trade (AfCFT) Agreement extending steel demand beyond our borders.

African countries consume what they do not produce; and produce what

they do not consume. Africa imported R8 trillion worth of goods in 2019 but only R1 trillion came from other African countries. Lowering trade barriers presents a massive opportunity for South African industries, and for development across Africa

Africa has 17% of the world's population, 3% of GDP and 1% of world steel production. Intra-African trade is only 18% of all traded goods. About 26% of South Africa's trade goes to the rest of Africa, and 80% of that to SADC.

The AfCFT Agreement, effective from 1 January 2021, has been signed by all 54 recognised African countries, and ratified by 43 (giving it a domestic legal basis). Phase 1 aims to reduce tariffs on 90% of goods in five years (81% have already been agreed), and 97% in 10 years, while Phase 2 aims to align protocols on competition, investment, IP and e-commerce.

The negotiations take place between existing custom unions (e.g., SADC, ECOWAS etc.) and countries not part of any union. Tariff offers are now being negotiated.



Localisation on its own can never drive industrialisation, and neither can import substitution, but a situation for fair trade should be created, clear of corruption and illicit import transactions.

Localisation, the argument goes, ignores the high but diffuse costs that society must pay even as it creates small but highly concentrated benefits for businesses whose output will expand. In many cases this argument is sound.

However, localisation was never meant to be undertaken at any cost. The argument that the manufacturing capacity in South Africa is unduly protected, making their product offerings uncompetitive, is a blanket statement which, in many cases, is not valid.

SAISI compared the local prices of structural steel offered by the mills to that of equivalent imported Chinese steel, not factoring in the duties and taxes, to see if there is any truth in the cost of local steel is problematic or is inflating the cost of fabrication. What we found is that the local offering is much in line with that offered by the most competitive region in the world.

The market remains the price setter, and the product can only demand space in the market at a cost-competitive price. Localisation is more about finding the ideal equilibrium between supply and demand, dealing with many wrongs responsible for the massive deindustrialisation of the South African manufacturing base.

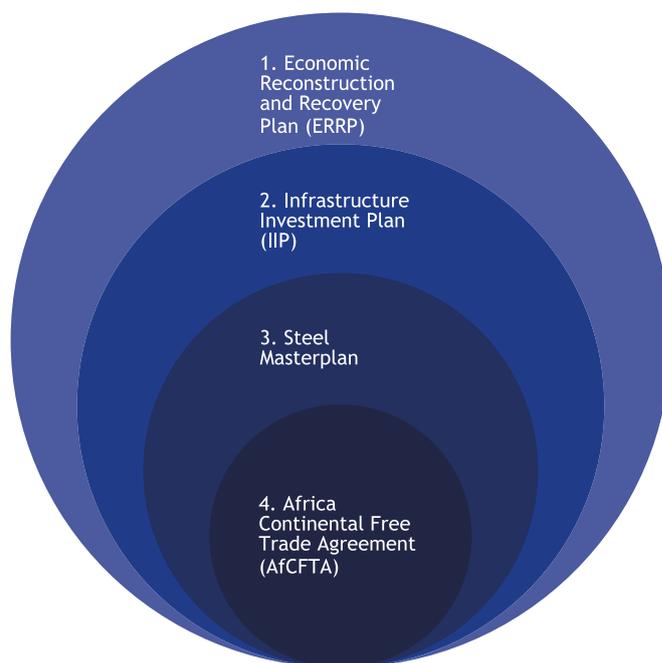
Background and Context of the Steel Master Plan

The steel value chain is the supporting pillar of the South African economy and is central to any industrialisation path.

Products and applications are used across the entire economy in mining, construction, infrastructure, automotive, packaging, and capital equipment - and are key drivers of competitiveness. The carbon- and stainless-steel fabrication sector is fundamental to manufacturing, and to the maintenance of energy and water supply to the nation.

Development of a Steel Master Plan supports sustainable long-term economic growth, the development of skilled jobs, and research and development for this important value chain.

This Master Plan has also been prepared to anchor the implementation of the Reimagined Industry Strategy and the Reconstruction and Recovery Plan, both of which are primary movers for integrated steel demand growth.



Steel Master Plan – readiness to support steel demand growth

The Steel Master Plan aims to build a consensus policy with six-, 12-, and 36-month delivery priorities to enable a competitive, dynamic, and inclusive steel industry to provide for investment growth and job creation.

Price and cost competitiveness are seen as key impediments to the industry's development and growth, with input costs being a fundamental challenge.

Increased productivity, moves towards wage stability, and retaining and growing jobs are linked to price and cost competitiveness.



Key challenges faced by the steel value chain

Reduced infrastructure spending has decreased demand for steel.

Chinese and global over-capacity and over-production have resulted in pressure on both primary steel and value-added products, which in turn has resulted in increased imports and the escalation of illicit trade.

Reduced domestic and global competitiveness has been exacerbated by steep increases in production costs (raw materials, electricity, logistics).

Increased deployment of trade remedy measures globally is resulting in exports being directed to the markets with lower protectionist levels.

Capacity underutilisation can lead to plant closures and job losses.

Loss of employment in the industry

Steel sector	2010	2019	2019 vs 2010
	44 965	29 095	-35%
Basic precious and non-ferrous metals	23 767	15 213	-36%
Casting of metals	4 108	4 342	6%
Structural metal products, tanks, reservoirs and steam generators	43 197	37 422	-13%
Other fabricated metal products; metalwork service activities	67 659	65 809	-3%

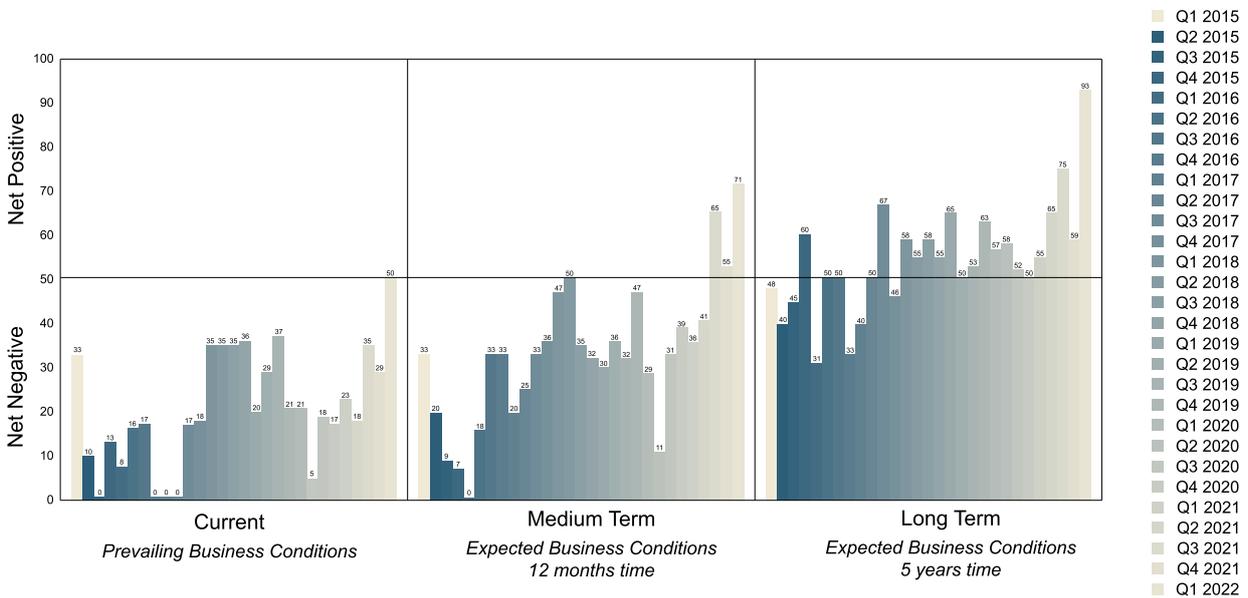
South Africa was always an exporter of steel but, since 2021, is a net importer of primary steel. Cost competitiveness affecting export ability has been exacerbated by increased logistics, electricity, and labour costs. This is largely what led to the closure of Highveld Steel, CISCO (which emerged from business rescue in September 2021), and Saldanha Steel.

Steel Sector Business Confidence Index

The SAISI Steel Sector Business Confidence Index recorded expectations in the short- to medium-, and long-term by measuring business confidence in the industry during the first quarter of 2022, showing a general upward trajectory.

The survey was conducted during the period 21 to 24 February 2022.

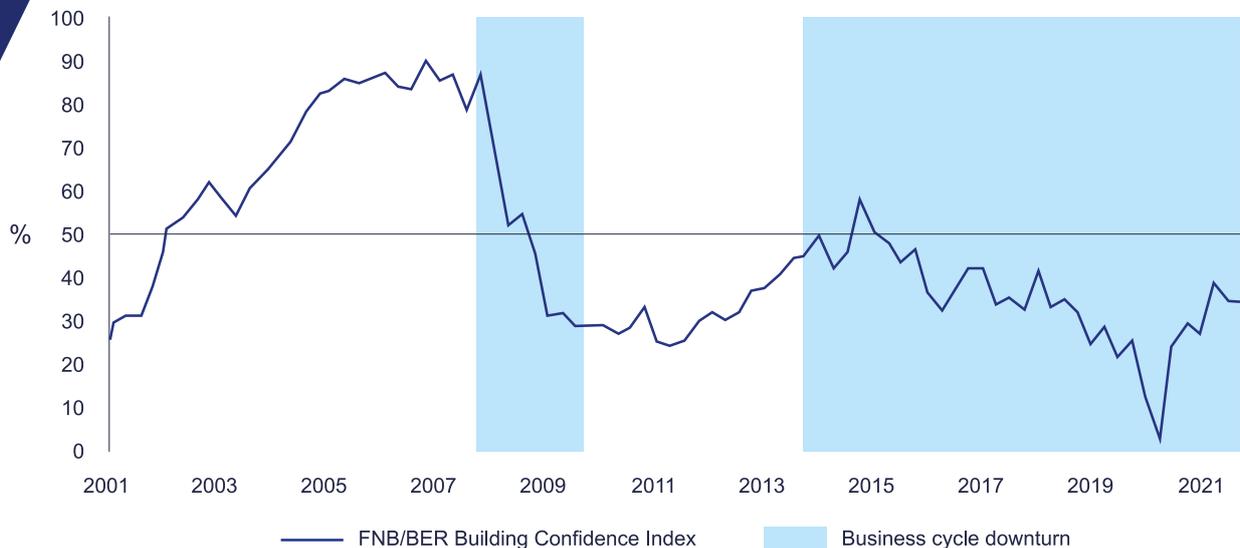
Steel Sector Business Confidence Index



The sub-sectoral FNB/BER Building Confidence Index remained relatively stable at 34 points in the fourth quarter of 2021. The overall RMB/BER business confidence index in South Africa remained flat at 43 in the same quarter, unchanged from the previous three-month period, amid concerns over recurrent power cuts across the country and rising inflationary pressures due to intensifying supply-chain issues. (The indexes can vary between zero - indicating an extreme lack of confidence - and 100, which indicates extreme confidence.)



FNB/BER Composite Building Confidence Index

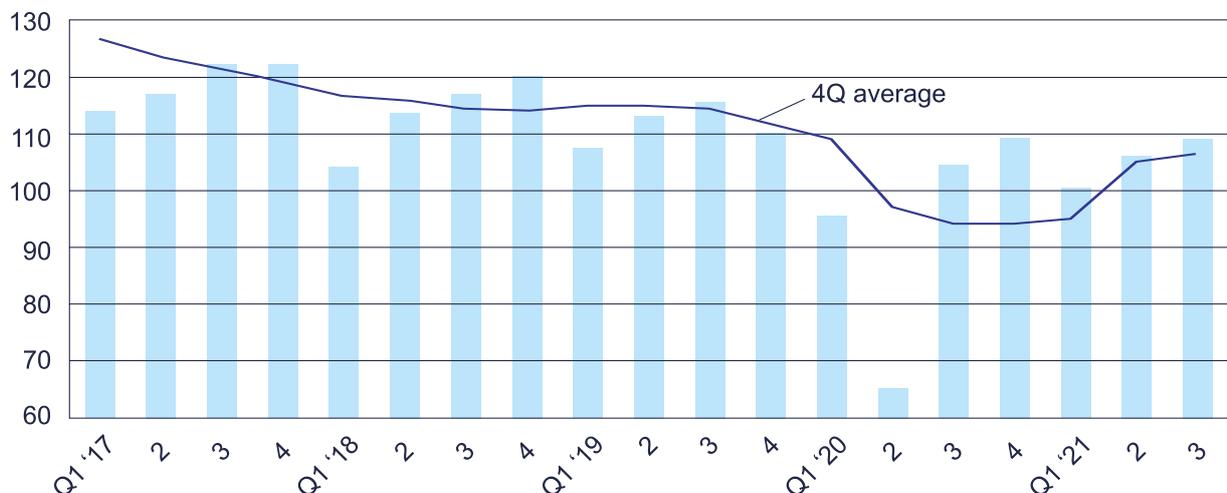


Source: BER, Stellenbosch University

The Afrimat Construction Index for the third quarter 2021 shows that the various building activity sectors have outperformed most others, including the economy at large. The current momentum of recovery in construction can be taken forward into 2022.

Afrimat Construction Index (ACI) – 3rd quarter 2021

Index: Q1 2011=100



Further recovery of the construction sector is on the cards for 2022 based on several growth drivers, including the dire need to repair and maintain infrastructure that has fallen behind schedule as a result of Covid lockdown regulations, and also renewed business confidence, as reflected by several authoritative indices.

Steel Sector Report Summary

When compared to a year ago, the relative stability of the overall business confidence index indicators shows a positive but delicate balance. This improvement indicates a stronger underpinning of the domestic business climate, despite negative economic factors.

Business remains resilient in a sluggish economy and a positive outcome for South Africa has come about as international commodity prices increase.

Even though Covid has had a negative impact on the economy (particularly in the second half of 2021), business resilience and tenacity have kept the economy from being too badly disrupted. Even though the business climate is not ideal, particularly for attracting much-needed fixed investment, it seems that South African society is determined to work toward a more stable social environment and a growing economy.

But a prolonged metalworkers' strike during October 2021 and its impact on business activity also weighed on sentiment. Supply chain disruptions, insufficient stocks, load-shedding and escalating cost increases will prevail for a while longer.

However, underlying activity is broadly better, led by the non-residential building sector and the building pipeline (architects and quantity surveyors). Importantly, there are also signs that tendering competition is easing, which has boosted profitability.

Meanwhile, Nedbank expects Gross Fixed Capital Formation to turn the corner in 2022. The rise in new capital projects being announced is encouraging, suggesting that the official fixed investment measures should improve after years of stagnation.

In addition, the ongoing domestic economic recovery, supported by softer Covid lockdowns, and combined with some progress in structural reforms in economic policymaking, should support fixed investment activity over the next two years.

There are few that would argue the role that the steel sector can and should play in the country's economic recovery plans. The challenge is securing a commitment from all those who are part of the South African steel value chain to a common goal of growth and development for the benefit of South Africa and her people.



About the Author

Charles Dednam



Charles Dednam is Secretary General of SAIISI. The steel industry has been his passion for almost his entire working career of 43 years. Since he left the corporate environment in 2011, he has analysed the interaction between the different parts of the steel value chain, deepening the understanding of the industry's deficiencies and improving the transparency of information to all stakeholders.

He is active as part of the analytical team in the roll-out of South Africa's Steel Master Plan and he offers his services as Principal of CD Research and Director of the Commodity Trade Observer.

More expansive statistics on domestic and export steel sales, steel imports, steel despatches to industrial groups, and steel stock levels are available from the SAIISI website www.saisi.org

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